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NATIONAL INSTITUTE OF MENTAL HEALTH ACTIVITIES REPRESENTING EIGHT MAJOR PROGRAMS OF THE INSTITUTE ARE DESCRIBED IN TERMS OF MEETING THE NEEDS OF NORMAL CHILDREN IN NORMAL ENVIRONMENTS, PROVIDING EARLY TREATMENT OF MENTAL AND EMOTIONAL DISORDERS IN CHILDHOOD, AND DEVELOPING TREATMENT AND REHABILITATION PROGRAMS FOR SEVERELY DISTURBED CHILDREN. INCLUDED ARE RESULTS OF BASIC RESEARCH, APPLIED STUDIES, SMALL LABORATORY EXPERIMENTS, AND LONG-RANGE CLINICAL INVESTIGATIONS. TRAINING PROGRAMS FOR PROFESSIONAL PERSONNEL, THE ROLE OF THE COMMUNITY MENTAL HEALTH CENTER, INFORMATION PROGRAMS IN CHILD MENTAL HEALTH, AND FUTURE TASKS ARE DISCUSSED. A LIST OF 153 REFERENCES IDENTIFIES THE SOURCES OF INFORMATION, GIVING TITLES OF PROJECTS, NAMES OF PROJECT DIRECTORS, AND INSTITUTIONS WHERE THE WORK WAS DONE. THIS DOCUMENT IS ALSO AVAILABLE AS PUBLIC HEALTH SERVICE PUBLICATION NUMBER 1396 FROM THE SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, D.C., 20402, FOR $0.40. (JW)

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Mental Health of Children

THE CHILD PROGRAM OF THE NATIONAL INSTITUTE OF MENTAL HEALTH

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MENTAL HEALTH OF CHILDREN

The Child Program of the National Institute of Mental Health

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Bethesda, Maryland 20014
December 1965

Foreword

From its very inception, the National Institute of Mental Health has devoted a large part of its effort—nearly one-third of the total—to activities relating to the health of children. This report provides an overview of the Institute's child mental health activities, and a sampling of specific projects and programs.

The large investment by the Institute in child mental health springs from a natural concern with the well-being of the young, from a special sense of compassion for those in our society who suffer disability even before they have had a chance to master their environment, and who endure pain and suffering before they have begun to sample the fruits of their heritage as members of American society. The Institute's effort in the area stems also, however, from sound scientific strategy. In mental health, more so perhaps than in any other area of public health, the bases of adult well-being or illness are laid in childhood. A major key to adult adjustment and health lies in the psychological and biological events of childhood; indeed, the origins of some of the most severe mental and emotional illnesses may be tracked to the early physical and emotional experiences of the child's world. Thus, the concern of the Institute with the child bespeaks a concern, too, with the whole man, along the entire span of his development.

The NIMH effort in child mental health can hardly be encompassed in a single report, for it traverses the varied efforts of research scientists, clinicians, community agencies and training institutions. In its substance, the program includes work in the most basic sciences—for example, in biochemistry, genetics, and experimental psychology—along with clinical studies of the mentally retarded, the delinquent, or the autistic child. Nevertheless, despite their diversity, the examples of the total effort reflected here will help provide the reader with an appreciation not alone of the scope and complexity of the NIMH program in behalf of children, but also of its guiding rationale and purpose. Underlying all of the Institute's varied efforts—from basic research to community consultations—is the endeavor to improve the mental health services required to meet the needs of our children.

This report was prepared by the NIMH Office of Program Analysis, directed by Dr. Julius Segal, in collaboration with the various components of the Institute whose specific efforts are reflected throughout the report.

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Introduction

SCOPE OF THE PROBLEM

In the fading days of the summer of 1965, in our Nation's capital, an 11-year-old boy was found spending his nights huddled in an apartment hallway with the only friend he knew—a stray dog. As millions of his young fellow citizens were beginning their zestful return to school, he devoted his full attention to the quest for survival—managed, somehow, through the haphazard handouts of food and drink from curious tenants, and the affection of the dogs he had claimed as his only companions.

Taken finally by police to a detention home, the now retarded boy's story unfolded: Through his meager decade of life, begun in a broken home, he had ricocheted from court to welfare department, from mother to foster home, from institution to psychiatrist. He had been tested but never treated, examined but never loved. So it was that he had long begun to spend his own love on dogs, not people.

The boy's history might well serve as a backdrop in reviewing the following summary data, which help define the scope of effort required to maintain and improve services for children in the mental health field:

- Recent surveys by the NIMH Office of Biometry reveal that during 1963, about 4,000 Americans under 15 years of age and 27,000 between 15 and 24 years were admitted to mental hospitals, both public and private. At the end of the year, 5,000 children under 15 and 25,000 children between 15 and 24 were living their broken lives in these hospitals. Both the first admission rates and the resident population rates for children have increased at an accelerated pace during the last decade--and the rise cannot be explained altogether by pointing to the relative increase in the number of children in the general population. Take, for example, boys between the ages of 10 and 14: In the general population, this group has increased almost twofold since 1950, but it has increased almost sixfold in the mental hospital. No such contrast exists with regard to the American mental hospital population as a whole; here the resident patient rates have declined.
- Projections for the decade 1963–73 show that in the age group 10–14, we can expect an increase of 15 percent in the proportion of 10–14 year olds in the country's population; in the mental hospital, however, these children will increase by 116 percent. For older children—between the ages of 15 and 24—we can expect a 36 percent increase in the population as a whole, but a 70 percent increase in the wards of mental hospitals.
- In public and private institutions for the mentally retarded, 13,000 children under 20 years were admitted for the first time in 1963, while 78,000 such children were residents at the end of the year. Rates for this age group—for both first admission and resident patients—have shown a gradual increase during the last decade.
- Data, again from the Institute's Office of Biometry, show that the toll taken by the major mental and emotional disorders is hardly restricted to the adult years. Among public mental hospital resident patients under eighteen, 43 percent were diagnosed as psychotic, 27 percent as retarded or suffering acute and chronic brain syndromes, and the remainder as victims of a variety of personality disorders reflecting both constitutional deficiencies and environmental trauma.
- Among children outside the hospital, too, disorders may take forms generally associated with the adult—psychoses, neuroses, psychosomatic problems; or they may be reflected in retarded mental development or in delinquent behavior. An estimated 10 percent of public school children in the United States are emotionally disturbed and in need of psychiatric guidance, and at least 250,000 with less serious psychiatric disorders receive services each year at mental health clinics. Well over 500,000 children are brought before the courts each year for the kinds of antisocial acts we recognize as symptoms of juvenile delinquency,

many of them suffering from emotional disorders reflected in their behavior; last year, while the number of American children in the 10–17 age group increased by 3 percent, the number of delinquency cases in this same age group rose by 10 percent. And, observers have noted with concern the incidence of suicide among disturbed adolescents.

Despite the needs reflected in these figures, outpatient clinic data point up the paucity of services available to children. Of the Nation's approximately 1,800 mental health clinics, somewhat less than one-fourth are child guidance clinics; moreover, only 32 percent of the 300,000 patients under 18 years seen at outpatient clinics in 1963 were treated. A large proportion of all counties in the United States are without mental health clinics altogether, and most of these also lack agencies that substitute in some measure for such services.

At least some of the increases noted in the incidence of children's mental health problems are, of course, a reflection of better diagnostic and record-keeping procedures. In any case, the foregoing data do not imply a failure of past efforts. The field of mental health as an organized domain of human activity is young—as are the sciences that serve it. Rather, the data serve as a spur for the mobilization of resources for the years ahead. They define our goal: To provide an arsenal of knowledge, techniques, and services that will reverse the tide and, ultimately, enhance the well-being and productivity of all of our youth.

This report describes the continuum of effort by the National Institute of Mental Health in that direction.

PROGRAMS REPRESENTED

Emphasis throughout this report is placed on substantive issues and results achieved rather than on the Institute's administrative mechanisms and organizational framework. It is important, therefore, to identify at the outset the various major programs of the Institute whose efforts are reflected through this report:

Research Grant Program.—Designed for the support of both basic and clinical research projects in a variety of academic, medical, and other institutions—with projects ranging from small, exploratory studies to large clinical centers for extensive, long-term programs of research.

Mental Health Project Grant Program.—Designed for the support of community demonstrations and other research investigations to promote the development of improved methods of care, treatment, and rehabilitation of the mentally ill.

Intramural Research Program.—Comprising 12 laboratories and branches for both clinical and basic research concentrated at the NIH Clinical Center in Bethesda and certain other settings which provide a favorable climate for intensive attacks on mental health problems—not only by a single discipline but also through a collaborative approach.

Biometrics Program.—Focused primarily on the conduct of research on the prevalence of mental disorders, including consultation to State facilities on the design and execution of survey studies, and to basic scientists on the application of advanced statistical and mathematical techniques.

International Research Program.—Comprising a worldwide range of activities designed to utilize foreign resources as an essential part of the Institute's responsibility to further mental health research and practice in the United States.

Training Grants Program.—Designed to help meet the Nation's need for professional personnel in the various fields of mental health through direct support of training institutions, and through the provision of financial assistance to persons who seek training for careers in mental health.

Community Mental Health Centers Program.—Designed to administer programs for the construction and staffing of comprehensive community mental health centers throughout the country.

The National Clearinghouse for Mental Health Information.—A scientific information evaluation center designed to collect, process, and disseminate information relating to mental health and illness.

ORGANIZATION OF THE REPORT

The varied NIMH program in child mental health can be viewed along a number of alternative dimensions, and thus a variety of organizational schemes or outlines might have been used in this report. It would have been possible, for example, to divide the report into segments dealing with basic research, clinical research, and field studies. Or, emphasis might have been placed on the various stages of child development, or on specific health problems of children—for example, schizophrenia, retardation, delinquency.

None of the above alternatives would have fully accomplished the major purpose of this report—

which is to describe how all elements of the NIMH child program converge upon the same goal, improvement of the range of services available to children in need of help. It is for this reason, therefore, that the results of basic research projects are described together with those of applied studies, small laboratory experiments together with long-range clinical investigations, and that analyses of specific stages of child development are to be found throughout. It is the child's needs—from conception through entrance to adult life—which provide the focus for this report, and since these needs are so varied, complex and interrelated, so, too, is the work that must be done to satisfy them.

Reflected here is a recognition by the Institute that if we are to build a continuum of services to enhance the mental health of children, we must buttress the effort with a continuum of scientific endeavor—from basic, normative studies of child development to community-based evaluations of new approaches to the care of the severely disturbed child. It would hardly profit children if we were to design, plan, and build new facilities housing services—whether educational, legal, or psychiatric—were we not also to have available the basic knowledge and the techniques which are the core of any helping process.

The three chapters immediately following contain examples of activities designed to serve the mental health needs of children at three levels:

- In the first of these chapters, emphasis is placed on the normal child in the normal environment. Here, the "services" provided to the child are those into which he is born—the family, the school, the community—and the task at hand is to so enhance the child's environment that mental health is maintained and pathology is aborted at the primary source, before the child is separated from the general population. Because our concern here is with the normal child rather than with the sick or atypical child, the work reported includes a number of basic studies in the behavioral sciences—a reflection of the continuing need for better baseline data describing the child and his behavior. An understanding and treatment of the communications problems seen among schizophrenic children, for example, requires that we first know more about language development in general; attempts to understand the pathological emotions of disturbed children do not make much sense unless we know more than we do now about the parameters of emotional development; and, as one more example, learning problems of retardates are meaningful only in the context of learning studies of normals. The major manifestations of mental and emotional disorders in children, the methods of their prevention and cure, and the promotion of mental health are inextricably interwoven with problems of learning, perception, cognition, emotion, motivation, personality, interpersonal relations, and individual and group attitudes—areas covered here.
- The second chapter focuses on work whose long-range purpose is to provide early treatment of mental and emotional disorders for those children for whom primary preventive health resources were either inadequate or too late. The aim is to draw on other resources within the community—for example, special schools, outpatient clinics, courts—to forestall more serious difficulties and institutionalization. Thus, while the work reported here includes basic studies, much of it deals with the application of basic knowledge to the solution of the problems of atypical children—efforts, for example, to lessen social disability in potentially delinquent youth, to apply new methods for teaching the retarded, or to adapt drug therapy to the needs of disturbed children. In terms of prevention, this is the second line of defense—the utilization of community resources short of institutional care to speed the child's return to normal life.
- The last of the three chapters immediately following deals with work oriented toward children so severely ill that they require institutionalization—the third line of defense. Here, the ultimate aim is to develop treatment and rehabilitation programs which will enable the child to return to his family and community—that is, to prevent his wasting away in isolation. The chapter focuses on services for children in a variety of residential settings, and the projects described are examples of those in which investigators are examining the effects of a wide range of rehabilitative factors in existing treatment procedures, and using the knowledge derived from such work in the development of new approaches.

The remaining chapters of the report deal, in turn, with: the role of the community mental health center program in child mental health; the provision of trained personnel in the mental health field; the accumulation and utilization of a fund of evaluated scientific information in all areas of child mental health. A final chapter provides a brief description of future tasks.

REFERENCES

It should be kept in mind that this report is in no sense exhaustive in its survey of the Institute's child program. Nor should the reader conclude that the references to specific projects included here necessarily encompass all of the most significant work in a given area. The intention is simply to provide the flavor of the complex and varied effort directed toward maintaining and improving child mental health; the specific work cited should be regarded, therefore, only as examples of many comparable projects and programs. Further, in a report of limited length covering such varied activities, it has not been possible to present the many potential ramifications of each effort cited. The reader should also be aware that the inclusion of a particular study under a given heading is often arbitrary, since a project is often equally relevant to two or more areas of major effort.

References at the close of the report identify project directors, the titles of their projects, and the institutions at which the work reported here was done.

The Child in His Normal Environment

INTRODUCTION

In order to prevent, control, and ameliorate emotional disorders in children, the Institute supports studies in genetics, biochemistry, neurophysiology, psychiatry, psychology, sociology, anthropology, epidemiology, and other disciplines. Many of these studies focus on specific psychopathological phenomena. But basic behavioral research—to obtain normative data on the physiological, psychological, and social growth of the normal child—is also an integral part of the Institute's program and in some respects the more important part. For the results of such research provide the baselines from which deviations in the development of the disturbed child can be measured and understood, and the insights by which many of the origins of adult illness can be identified. The NIMH basic research effort also reflects an important feature of the Institute's mission—its emphasis on mental *health* as well as illness, on work designed to enhance the child's potential—intellectual, emotional, social, cultural—as well as to resolve specific problems of psychopathology.

The Institute's work in child development focuses on three areas: the critical first years of life, the family, and the school. This concentration of effort reflects the fact that parents and teachers are the adults with whom the child spends the largest portion of his time and who are, then, in the main, the dominant influences on his life. To a large extent it is they, through the process of socializing and educating the child, who transmit the best—and the worst—of our culture from one generation to the next.

The work comprises a broad group of studies. Research on the family's contribution to a child's development extends from genetic influences at one end to the impact of social change on family life, and therefore on the child, at the other. Projects dealing with the school and the child include studies of learning, of school problems in deprived areas, and of the relationships between particular personality factors and learning and behavior. It will be seen that much of the research has implications either for improving our present services to children or for instituting new ones.

This chapter, in short, presents samples of Institute projects concerned with understanding and strengthening the first line of defense—made up of those factors contributing most importantly to the child's normal environment—in the campaign to prevent mental illness and to make for sounder mental health throughout life.

PRENATAL AND POSTNATAL FACTORS

The importance of the early months and years of life to later adjustment has been stressed by eminent clinicians for nearly a century with the evidence of abundant case studies. Corroborative scientific evidence is beginning to emerge as these theories are subjected to experimental investigation. Findings from a number of fields are contributing to these investigations. The field of genetics, for example, is of increasing interest to the behavioral sciences as it explores the interaction of heredity and environment on growth and development. Psychiatrists, psychologists, obstetricians, and pediatricians are all combining their efforts to determine the factors contributing to a normal birth. They are also documenting in detail the physiological and psychological growth of the infant in the neonatal period.

The Role of Heredity in Growth and Development

In general, human and animal genetic research is focused on such important questions as these: just where in the broad fields of intelligence and personality does heredity have its principal influence? What hereditary characteristics seem to be involved in the development of mental illness? Should emphasis on family-child relationships as a major cause of mental illness give way in part to a strengthened emphasis on hereditary factors?

As researchers supply answers to such questions, it should be increasingly possible to anticipate a child's strengths and weaknesses in adapting to his environment. At several centers, genetic counseling services are available to married couples with physical or mental illness in their family backgrounds; these couples wish information on the probability that they will be able to have physically, emotionally, and intellectually normal children. The counseling centers are directly dependent upon genetic research from which such probabilities are determined.

A comparison of differences between a group of identical and a group of fraternal twins on a variety of physiological and psychological tests in a recent large-scale study [1] emphasizes the interacting roles played by heredity and environment. Identical twins have developed from the same fertilized egg, so they have the same heredity, and any differences between them are presumably caused by environment alone. But fraternal twins, having developed from two fertilized eggs, have different heredities; hence the differences between them have been caused by heredity and environment. Through statistical analysis of these differences, investigators are able to say whether a given characteristic appears to be strongly or weakly controlled by heredity.

From an analysis of these differences one scientist reports these salient points:

- Heredity influences behavior in many of the factors commonly measured by psychological tests, such as the abilities described as numerical, verbal (understanding of words), spatial (the ability to perceive patterns and structures and to move them around in the mind, keeping the relationships intact), and word fluency. Reasoning and memory do not show a strong hereditary influence—quite possibly because a standard mental abilities test does not deal with enough of the factors involved.
- Motor skills decidedly affected by heredity include, for example, manual dexterity and balance.
- Activity, vigor, impulsiveness, and sociability seem to be hereditary—but not dominance, stability, or reflectiveness. Other tests indicate a relatively strong hereditary influence upon neuroticism and the display of nervous tension. However, most personality tests are inadequate to disclose any significant genetic role in personality traits.
- Some of the ways in which the body reacts to stressful situations appear to be influenced by heredity. In a laboratory situation, most of the twins in one study responded to mild stress by changes in the rate of heartbeat, the rate of breathing, and the galvanic skin resistance. The changes in the heartbeat and breathing rates were much more alike in the identical twins than in the fraternal, indicating the influence of hereditary factors.

The evidence just cited for a genetic factor in some types of responses by the autonomic nervous system may also indicate a genetic factor in psychosomatic illness. For example, the person who naturally responds to stress by an above-normal increase in his heartbeat may be more likely than other persons, it has been hypothesized, to develop a psychosomatic heart ailment. Other investigators have suggested that persons with different personalities develop different kinds of psychosomatic complaints. Hence, the scientist conducting the twin study reports, there may well be a close relationship between illness and two factors that seem to be controlled in part by heredity—personality and the activity of the autonomic nervous system.

A number of investigators are concerned with the stability or constancy of traits from infancy through childhood. In one study, [2] the responses of more than 300 infants to various stimuli were tested and charted. The results suggest that the newborn has a behavioral and physiologic pattern all his own. The reaction of a given baby to a particular stimulus, be it a loud noise or a gentle rocking, may be quite unlike another. But whatever the infant's response—such as a sharp rise in heart rate or increased irritability—it appears to be typical for that baby from the start. Such individualistic patterns of behavior may explain why certain environmental stresses produce severe personality deviations in some children and not in others.

This type of research—involving the careful tracking of early bits of behavior—may help to teach us how to spot those infants predisposed to later emotional instability or to psychosomatic disorders. In this connection, Institute scientists [3] are attempting to determine whether certain physiological characteristics displayed by newborn babies are associated with other patterns of behavior as they grow older. For example, rapid and irregular respiration rates in sleep and high consumption of formula among male infants have been found to be correlated later (at 1 month) with such behaviors as restlessness and unresponsiveness to physical contact, and still later (at 2½ years) with less friendliness and more intense play with inanimate objects. These are only hints—but they reflect the continuing attempt by scientists to understand the complex psychological and physical unfolding of the child.

The search for constant patterns in infant development does not, of course, negate the importance of environmental factors. Some idea of how even very young babies are affected by differences in the environment comes from an Institute study [4] of 30 Japanese and 30 American mothers and their babies, who were from 3 to 4 months old. Sharp differences were found in both maternal care and infant behavior. The Japanese mother stays physically closer to her baby than the American mother and communicates with him more in physical ways—such as holding, rocking, carrying—than in verbal ways. In consequence, the Japanese baby is quieter and less active then the American. American mothers leave their babies alone more frequently but talk to them significantly more. The American baby responds by being more vocal, more active, more engaged in playing with toys and other objects.

Heredity in Mental Retardation

A recently completed large-scale study [5] supported in part by NIMH has helped to clarify the role of heredity in the occurrence of mental retardation. The investigators traced the pedigrees of a group of 289 mental retardates. The final report contains comprehensive genetic and social information about some 80,000 persons.

The investigators report that retardates have a lower rate of reproduction than normal adults; they do not replace themselves in the population. However, the study concludes that transmission of mental retardation from parent to child is by far the most important single factor in the persistence of this social misfortune.

Explaining the probability of having a mentally retarded child can be very helpful to married couples who are worried about the question, and who must make the final assessment of the risk they wish to take, the investigators point out. But couples in which both partners are too retarded to seek counseling or to comprehend it offer a major problem. For this much larger group, the investigators raise many questions having far-reaching social and economic implications. Extensive intelligence test data reported by the study tell us much about the level of skills that mental retardates are capable of developing; hence the findings point toward measures for ameliorating the social and economic conditions of mental retardation. The investigators also found a subgroup of children of normal or above normal intelligence born of mentally retarded parents. These children desperately require educational, social, and employment services to survive an economically and socially deprived background.

Heredity in Mental Illness

Familial studies of schizophrenics and manic depressives are now being conducted by the investigators [5] who studied mental retardates and their families. The data resulting from this and other research in progress should do much to clarify the role of heredity in mental illness.

In one of the major projects in this field, Institute investigators [6] are studying a number of families with identical twins, one of whom has schizophrenia. The reason one twin has become ill and the other has not, the investigators point out, must lie in differences in interpersonal relationships, stress and growth experiences, or nongenetic biological factors—such as position in the womb or infection—before and after birth.

As the major finding so far—the sample now includes 11 families—the investigators report a pattern of consistent differences in the life histories of the twins. The index twins, meaning those who became schizophrenic, weighed less at birth and demonstrated more "soft" neurological signs—that is, behavior suggestive of organic impairment. They tended in childhood and adolescence to be less competent, organized, and effective; and tended to be more sensitive, anxious, and unhappy from a very early age. As yet, it is not clear whether the findings relate to schizophrenia alone or, more generally, to a susceptibility to various forms of psychopathology. The investigators tentatively suggest that in these families, initial, nongenetic, constitutional differences contributed to or determined the very early establishment of role differences. For example, in the first five pairs of twins studied, the smaller and lighter index twin was perceived by the mother as being in peril, as in fact he was in three cases, and as requiring considerably more protection and attention. As a result of the role differences, the smaller twin experienced a sequence of events in childhood years that accentuated the original disparity in the twins' potentials. The index twin became more dependent than the other and less competent—increasingly less able than the other to cope with the developmental events of childhood and adolescence. At the same time, the difference between the twins caused periodic conflict within the family, perhaps contributing to the stress associated with psychotic breakdown.

Samples of blood or urine from these twins are being analyzed by three investigators who in recent years have reported the discovery of biochemical factors apparently associated with schizophrenia. The work is done blindly; that is, the investigator does not know whether a particular sample came from a schizophrenic or a nonschizophrenic twin. Two of the investigators have not completed their analyses; the third has been successful to a considerable extent in distinguishing between the twins. His judgments are based on measurement of the lactate pyruvate ratio in the blood plasma, which in schizophrenics he had previously found to be abnormal. Of nine pairs of twins, this investigator correctly identified eight of the schizophrenic patients on the basis of at least one of two plasma samples; of eight control twins, he called one schizophrenic and one questionably schizophrenic. The results are statistically significant. Analysis of samples from the twins' parents gave a positive finding for six of the nine fathers but for only one of the nine mothers; none of the parents was clinically schizophrenic. The Institute scientists conducting the twin study point out that such findings, though their relationship to schizophrenia is not yet clear, call for further work along the same lines.

Another Institute scientist has completed a major work introducing new methods and concepts in the study of the heredity-environment problem in schizophrenia [7]. He has found that:

- An inherited factor in schizophrenia is probable.
- The course of illness, as manifested by clinical subtype and various behaviors during psychosis, reflects the inherited factor.
- The severity of the illness reflects primarily environmental factors.
- The major features of test performance that have been linked to schizophrenia reflect primarily the severity of the condition rather than any inherited schizophrenic factor.
- At least among plural births such as identical twins or quadruplets, prenatal influences, especially those that lead to sizable differences in birth weight and adult height, affect the severity of the manifest illness.

Iceland is being used by another scientist as a "natural laboratory" for a genetic study of schizophrenia [8]. This investigator hypothesizes that a specific hereditary susceptibility to schizophrenia exists, and that the disorder is dependent on two genes, one dominant and the other recessive, both needed for its development. Iceland's small, unusually stable and geographically concentrated population, together with its excellent census and medical records, is making it possible to test a theoretical frequency of occurrence of the disorder against the actual frequency in relatives of schizophrenic patients in Iceland's mental hospitals.

Investigating the inheritance of the psychoneuroses, one grantee [9] has made a statistical study of the ratings of 58 pairs of twins on 10 personality scales, each scale measuring tendencies toward behavior of a certain type, such as hysteria, psychasthenia, schizophrenia, and social introversion. It would appear, the investigator reports, that the neuroses with hypochondriacal and hysterical elements have little or no genetic components, while those with elements of anxiety, depression, obsession, and schizoid withdrawal have a substantial genetic component, at least under the environmental conditions obtaining for the individuals studied.

One of the many studies seeking to clarify the roles of heredity and environment begins with schizophrenic parents whose children were given up for adoption at an early age [7]. Matched to this group are parents who have not been known to have any psychiatric disorder but whose children were also given up for adoption at an early age. The two groups of children will be compared in terms of a number of psychological factors.

The way that heredity and environment—in particular, early influences—interact to affect later behavior can be observed most readily in animal studies. One geneticist [10] reports that, while certain early experiences may indeed affect later behavior tremendously, in some cases they may have little or no effect. A crucial factor is the genetic situation.

As part of his evidence, this investigator subjected carefully bred mice to certain types of stress during infancy. Some of them, as adults, became significantly more aggressive than usual; others became less aggressive; others showed no effect. The aggressive response depended upon the strains to which the mice belonged; that is, upon heredity. In most cases, the results depended also upon the time when the stress had been encountered in the first weeks of life. Psychological factors thus appear to act on a biological substratum—on inherited tendencies and mechanisms.

The same investigator [10] may have uncovered the inherited mechanisms responsible for a certain kind of abnormal behavior in animals. This is a tendency toward audiogenic seizures—epileptic-like convulsions induced by the ringing of a bell. Three strains of mice highly susceptible to seizures show a characteristic difference in a thin layer of cells in the hippocampus. The difference, revealed by a staining procedure, appears to be caused by the amount or the activity of one or more closely related enzymes. In the test tube, at least, the difference apparently involves a reaction related to energy release.

Prematurity and Emotional Health

A number of studies have suggested that in many cases of prematurity—which is associated with relatively high mortality and neuropsychiatric disability rates—emotional stress has an important part. NIMH-supported researchers have studied the effects of prematurity on the mother and child and investigated measures that can be taken to help the mother adjust to a premature infant so that the emotional health of both will be unimpaired.

To test for psychogenic factors, one research group[11] studied 30 mothers to whom premature babies had been born and in whom no obstetric or other medical cause of prematurity could be found, and 30 mothers of full-term babies. The mothers of the premature babies tended to be more definitely negative to the pregnancy, to harbor more destructive fantasies about the outcome to the baby and themselves, and to show other differences.

The investigators have developed a self-reporting test (MAPI—Maternal Attitude to Pregnancy Instrument) which will be administered to pregnant women in an effort to learn whether or not prematurity can be predicted. If it can be, preventive measures can be taken. In most cases, the investigators believe, specialized psychiatric treatment would not be required—simply greater supportive attention by the obstetrician.

Another group of investigators [12] has analyzed the birth of a premature infant as a crisis period for the mother. They have identified two patterns of coping behavior which mothers faced with this crisis employ. Having identified the patterns, they have used them with great accuracy to predict whether or not the relationship between mother and child, once the crisis has subsided, is likely to be emotionally healthy.

The research group believes that behavior during a crisis period can be considered also in terms of psychological tasks. Each crisis presents a number of such tasks, and the degree to which these are mastered bears upon the functioning both of the individual and of persons intimately associated with him. For example, each mother who had reached a healthy relationship with her child by the end of the crisis of prematurity, the group found, had completed four tasks, or gone through four phases: Grieving in preparation for the possible death of the child; acceptance of her failure to deliver a full-term baby; resumption, as the baby improved, of the hopes she had during pregnancy; and finally, recognition that the baby had special needs, which she must prepare to meet, but that these were temporary.

A number of factors were used in judging whether or not a woman had completed these tasks. Of particular interest among the findings, the investigators report, was the high correlation between, on the one hand, the mother's pattern of visiting the infant during its prolonged stay in the hospital and, on the other hand, a healthy emotional outcome for mother and baby. This finding suggests that any care-giving person may be able to judge the likely outcome of a prematurity crisis and, when desirable, take measures to modify it.

Physiological and Psychological Development

Investigators schooled in a variety of disciplines are studying various aspects of growth and development during the formative first months of life. For, if the normal patterns of physiological and emotional development can be thoroughly understood, diagnostic techniques can be developed to detect deviations from normality and preventive measures can be taken.

A unique and rich source of data for such workers is available now in a series of six volumes that provide a description of the cerebral cortex at critical periods of human development. These volumes are the product of painstaking research [13] begun in 1931 and supported by NIMH since 1947. Descriptive neuroanatomical data are available for the newborn, the 1-month infant, the 24-month infant, the 4-year-old, and the 6-year-old. This project has contributed basic information having an important bearing on the problem of the development and organization of human behavior and filling a significant gap in man's knowledge of the developing cellular architecture of the cerebral cortex.

Because of the vulnerability of the developing central nervous system, a reduction of oxygen supply to nervous tissue before birth or at the moment of birth has been implicated in a host of later disturbances, including neurological defects and lower IQs. Working with animals, a researcher [14] has identified the periods in neurological development during which oxygen deprivation produces the most profound effects. He has described the differential effects of various periods of anoxia, showing what skills and abilities—such as learning, retention, transfer of training to new situations—are affected in each case. Since the widely contrasting effects of anoxia at different stages of early life appear to be related to levels of brain development, these findings—in addition to their importance for understanding the physical basis of mental retardation—have opened the possibility that oxygen-deprivation techniques can help in determining the locations in the brain of centers involved in certain important phenomena.

Another investigator [15] studied 26 children, of whom 9 suffered a delay of respiration at delivery. During most of the first two years of life, these nine were found to have significantly lower development quotients than the others, but the differences were not there when the children were 2 and 3 years old, suggesting a gradual recovery process.

Traditional views that a baby's visual world is formless or chaotic because he has not "learned to see" or because of the immature state of the eye and brain, are challenged by the finding that a group of babies under 5 days of age consistently looked longer at patterned surfaces than at plain surfaces. The results of the study [16] indicate that a human being is born with the ability to make visual discriminations and that an infant is more attracted by pattern than by color or form. The 18 infants in the study ranged from 10 hours to 5 days old. An earlier study of infants from 2 to 6 months old provided similar results.

This project is typical of a number supported by NIMH that are designed to trace the development of a child's perception. Maturation of the visual apparatus is necessary to serve the infant's normal needs to recognize those close to him and then to explore and to learn. Another investigator [17] is developing remedial measures for brain damaged and mentally retarded children on the basis of research conducted on the child's perceptions.

Sleep patterns during infancy are being studied by several NIMH investigators [18]. Since these patterns have been found to be related to neurological and therefore mental development, it may be possible through them—as detailed descriptions of the electroencephalographic and physiological characteristics of infant sleep are accumulated—to establish norms for infant mental development. Because infants sleep much of the time, and behavioral testing is impossible at an early age, sleep patterns may provide the early warning signals of abnormal development.

Feeding Experiences and Developmental Problems

Of all infant-care practices, feeding has been the one of primary interest to investigators, not only because satisfaction of the infant's food needs is critical for his normal physical development but also because feeding may be the occasion of important social interaction and physical contact.

An Institute grantee [19] reports a number of significant positive correlations between oral gratification during infancy and preschool measures of ability to cope with the environment. Children whose early feeding history indicated that they had been relatively satisfied—regardless of the feeding method used—more often demonstrated later on such favorable attributes as tolerance for frustration, a sense of self-esteem, strength of interests, resistance to fatigue, and acceptance of others. The investigator concluded that oral gratification during the first 6 months of life tends to leave the baby generally tension free and thus to facilitate a good adjustment to the environment and the development of a wholesome self-concept.

In a study of another group of children [20], preliminary findings indicate that such developmental disorders as head-rolling, self-injury, and failure to thrive can be traced to the behavior, particularly at feeding time, of emotionally disturbed mothers. These women were found to be, in most cases, irritable, distant, neglectful, depressed, and markedly anxious, and to go from one crisis to another.

For development to proceed normally, the grantee hypothesizes, the infant's feeding experiences must be such that the organism remains in equilibrium. On the one hand, the infant must be sufficiently aroused by the mother's actions to respond to sensory stimuli; on the other hand, the amount of tension generated must stay within bounds. When the equilibrium is upset, a variety of behavior distortions may arise—among them, insufficient sucking, hyperirritability associated with feeding, regurgitation, a fearful avoidance of food, aversion to dietary change, and abnormalities—such as head-rolling or body-swaying—in the methods used to reduce tension.

This study is part of a long-term investigation seeking to learn precisely which patterns of action and response of the mother and child during infancy may help give rise, through their effect on the developing sensorimotor apparatus, to personality troubles, psychosomatic illness, and other difficulties. If the investigator is able to demonstrate that certain maternal responses are harmful, he hopes eventually to let mothers see in moving pictures—made in the course of the research—how they are reacting to their babies' needs and to point out that certain aspects of their behavior are not ideal.

The most marked symptom in several of the children being studied by this investigator is pica, a craving for unnatural foods. This has become a public health problem of some size, because the afflicted babies often eat paint-covered plaster and then develop lead poisoning, which affects the central nervous system and may result in convulsions and death. In an attempt to find the lead-eaters early enough, teams of doctors and nurses are going into homes in some parts of Chicago and collecting urine samples for analysis.

An investigation [21] in the District of Columbia of children suffering from pica indicated that this condition occurs chiefly between the ages of 18 months and 2 years of age. In lower socioeconomic groups the incidence is between 50 and 60 percent; in higher income families, about 30 percent. No correlation was found between the occurrence of nutritional deficiencies and pica; pica, the study emphasizes, represents an attempt to satisfy oral needs. In most cases the mother of an afflicted child had not adequately controlled his oral activities—because she was absent from the home, had emotional problems, was permissive about the child's bizarre eating habits, or even had the same habits herself. There are communities, especially in the southeastern part of the United States, where the eating of clay and laundry starch is part of the cultural pattern.

Except in the relatively infrequent cases where the child was seriously brain-damaged, psychotic or severely neurotic, the study found that pica in the child could be quickly cured by treatment of the mother through education or psychotherapy. The investigators hope that inquiries about bizarre eating habits will be made part of a hospital's routine history-taking procedure so that "pica-prone" families can be identified before symptoms develop.

Iron deficiency anemia may also be related to psychological aspects of the feeding situation. In a followup analysis, a group of children suffering from this deficiency were studied a year after discharge from the hospital. The investigator [22] found that, compared with children in a control group, the anemic babies had been less often breast fed and, as if in compensation, had remained on bottle feeding an excessively long time, had been more difficult to wean, and drank excessive quantities of milk. The findings suggest that the child, thwarted in the psychological gratification that comes with the availability of the mother, turns to his milk bottle for gratification—often to the exclusion of other foods. Since milk is low in iron content, the child runs a higher risk of developing iron deficiency anemia. This group of children also suffered more illnesses as well as more behavior problems.

Another group of investigators [2] found that satiated babies could be induced to suck as much as hungry babies. It was concluded that the sucking behavior of human infants could be explained as a function of the degree to which the infant was aroused and that it was not specific to the hunger state itself.

Diagnostic Techniques and Other Services

This section has provided a number of illustrations of how research on basic psychophysiological processes contributes to a burgeoning literature on child-care practices—a literature of value to both parents and professional workers. Research of this type also frequently highlights areas in which child services are needed, and forms the basis for appropriate treatment techniques. In addition, psychophysiological research may result in the development of diagnostic techniques for the detection and prevention of physical and emotional problems in early infancy.

For example, one byproduct of a series of investigations [23] on the metabolic factors associated with mental retardation was the development of a simple and inexpensive means of testing for metabolic disorder in a large number of newborn infants or older children.

Under this procedure, urine samples collected on filter paper and allowed to dry were mailed to the laboratory, where simple paper spot reagents were applied to detect 11 substances whose presence in urine is suggestive of a metabolic disorder. Time consuming paper chromatographic techniques were used only for confirming tests. Among 700 mentally retarded children, this procedure detected 3 with phenylketonuria, 3 with glycosuria, 1 with systinuria, and 9 with gross amino aciduria.

A retarded child who is found in a screening program to have a metabolic disorder may be too old to be helped by treatment, but the knowledge that the disease occurs in the family can be used by parents and doctors to prevent or reduce trouble in later children.

In other Institute-supported work [24], researchers have developed a test by which the presence of phenylketonuria (PKU), a cause of mental retardation, can be detected as early as the second day of life. (The urine tests commonly used may not definitely determine whether or not an infant is phenylketonuric until as late as the sixth week.) The new test involves measuring the serum phenylalanine level.

A comprehensive demonstration at a State school includes screening, followup, and a longitudinal, genetic study of families and collaterals of the entire groups of phenylketonurics at the institution [25]. Family counseling will be provided for known and newly found cases of PKU. The main purpose of this demonstration is to make the knowledge and experience gained available to other States.

Studies of the effects of the early mother-child relationship on babies' health, such as reported in this section, and studies of the effects of parental attitudes on children's personalities and emotional well-being, such as reported in the next section, have led to a number of NIMH projects to demonstrate ways of conserving and strengthening the mental health of mothers and families.

One project [26], for example, starts with the accepted view that pregnancy—particularly the first—is a critical period, the outcome of which profoundly affects the future of the marriage and the family. Hence the project offers prenatal counseling looking toward improved family relations, well-being, and personal competence. The guidance is for prospective fathers as well as mothers.

In another project [27], young mothers are interviewed in the last trimester of pregnancy to learn their reaction to pregnancy, their attitudes toward child-rearing, and their social and educational backgrounds. The mothers are offered monthly guidance in caring for their babies. After the babies are born, the mothers bring them back to the hospital several times for a moving-picture record of a feeding. Such maternal activities as feeding, cleaning, touching, and speaking are then evaluated. The investigators hope to determine what types of mothers most need guidance and can benefit the most when guidance is available.

Mothers who suffer postpartum psychoses or other serious emotional disturbances after childbirth often need to be hospitalized. This separation can be detrimental to the early mother-child relationship, and may even delay the mother's recovery. One investigator [28], therefore, is pioneering a program in which the child joins the hospitalized mother when her acute disturbance has subsided and a relationship with her therapist has been established. The baby is cared for by the mother with the assistance of staff nurses; management problems are discussed; and child-rearing techniques are taught. Home visits during and 6 months after hospitalization aim to alleviate the conflicts in the home.

THE HOME AND FAMILY LIFE

The home is the nucleus of the child's world. The family shapes his development. What he learns in the family—and for the most part this is subtle learning, through a psychological osmosis—influences his attitudes and actions for the rest of his life. Highlighted here are studies dealing with the processes by which the socialization of the child takes place; how personality and achievement are affected by different family settings; and how the germs of pathology can be planted by the interactions of family members.

Child Rearing and Child Personality

One group of investigators [29] has identified two parental child-rearing practices associated with certain attributes of preschool children. The first is the degree to which parents control the child's activities and promote parental standards. The second is the degree to which the parent displays warmth and involvement in caretaking functions. It was found that parents who displayed a high degree of both of these characteristics were more likely to produce assertive, self-confident children who could establish friendly relationships with their peers. Children whose parents exerted a moderate degree of control but displayed little involvement with them were lacking in self-confidence and socialized to a lesser degree with their peers. Parents who exerted little control over their children, but were essentially warm in their relations with them, had children who were impulsive and lacking in self-sufficiency, but sociable.

Another investigator [30] found that achievement motivation was most likely to be high among boys who had been exposed to training both in achievement and in independence. The data indicated that a boy needs more independence training from his father than from his mother. A strong, authoritarian father will often overwhelm and crush his son, destroying his achievement motive in the process.

The same investigator is currently testing these generalizations in Brazil, a society whose institutions are more authoritarian in structure than ours. Preliminary findings indicate that the achievement motivation of Brazilian boys is lower than American boys of roughly comparable social class. The investigator attributes this reduced achievement motivation to the authoritarian pattern of family life in Brazil.

Theories on the relationships between treatment in early childhood and later personality differences are being tested by a research team [31] against information systematically collected in six parts of the world where families have different ways of life and different theories and methods of training their children. As a result of the work to date, these investigators now believe that self-control is not the single, unitary trait they at first assumed, and that while direct, conscious, and planned training is important in its development, the indirect, unplanned, and unintended ways in which it is developed—or sometimes overdeveloped to a crippling degree—are also extremely important.

That child-rearing patterns do have long-term effects on the child's personality has been demonstrated in a 30-year study [32] supported in part by NIMH. This study found that behavior displayed during the age period 3 to 6 is a relatively good predictor of behavior during early adulthood. Such personality characteristics as passive withdrawal from stressful situations, dependency on family, the ease with which anger is aroused, and intellectual achievement were relatively constant from the early school years through adulthood.

The scientists who conducted this investigation also studied the role the mother plays in shaping personality characteristics. They selected four traits that mothers displayed in relation to their children and related these traits to the children's later behavior as adults. A protective, affectionate mother who was deeply involved in helping her child had boys who excelled in intellectual activity. Independent, self-reliant sons frequently had mothers who were rather restrictive and insisted on rigid standards and rules. But a carping and critical mother often suppressed achievement striving in her sons. A girl's reaction to such a mother was more frequently the opposite—she became an independent, intellectually striving adult. The mother who demanded accelerated achievement from her child produced both boys and girls who displayed a high level of achievement and success as adults. The investigators concluded that the mother's behavior not only exerts a dominant and permanent influence on personality but possibly on intelligence as well.

Such studies again suggest the necessity for services to detect as early as possible in the child's life deviation from normal development of personality and intellect. Generally the first opportunity for society to intervene to correct abnormal development is when the child enters preschool programs or schools. Some of the work being done along this line under NIMH direction or with NIMH support is discussed in this chapter's next major section, on schools.

Because of changes in the economy, an increasing number of mothers are employed outside the home. What impact does this change in role have on family life and the child's development? A recent investigation [33] of the effects of maternal employment was conducted in Puerto Rico, a unique laboratory for the study of the consequences of rapid economic development on various personality measures. Preliminary results indicate that no fundamental differences in child care, husband-wife relationships, or anxiety in the mothers occurred from the mother's assuming a working role outside the home. These findings support the results of other research conducted on this problem in the States.

The Importance of Good Communications

One of the best measures for preventing emotiontional disturbances and delinquency appears to be, on the basis of recent findings, good communications within the home. In families of normal adolescents, observers [34] found the children understood their mothers' expectations and were able to convey their own viewpoint to their mothers. In families having a disturbed child, however, the patient and the mother were in poor communication.

Lack of communication, the investigators report, may apply particularly to adolescents who are delinquent but not psychotic. In the present study, in any event, delinquent teenagers said they had been using their behavior to try to force open the communications at home, particularly with their mothers.

Family discussions are providing a number of investigators [35] with clues to factors influencing emotional health. Under one approach, the father, the mother, and one or more teenage children respond individually to a set of questions and then talk over those questions on which they differed. The discussions are recorded and later analyzed. This technique has been used to compare families having an adolescent child of very high intellectual ability with families having children of average IQ. Emotional health was found to be better and relationships warmer in the families with a brilliant child. Presumably these conditions were not the direct contribution of the child, for, when the parents were discussing a problem alone, their warmth and helpfulness were even greater than when the child was present. In other families, when the father and mother were alone, their relations grew rougher.

The investigator believes that intellectual competence is fostered by the warm family relations found in the high IQ families in this study. If a child's family life fulfills his needs, his energy is released for learning more about the outside world. But if he is tied up in neurotic conflicts in his family, he will not have the zest for taking in information from outside.

Pathological Family Interactions

The information about the nature and effect of pathological interactions within the family is now so extensive that Institute researchers [36], pioneers in this field, have used it not only to detect the presence of schizophrenic and neurotic disorders but also to identify the forms they take.

To distinguish one variety of patient from another, the judges used data only from other members of the families of these patients, not from the patients themselves. Data about patients and families have also been used to say which patient was brought up in which family. The data used include the results of individual projective tests, tape recordings of family discussions of the Rorschach ink-blot cards, and the results of a measure of thinking disorder called the Object Sorting Test. Scoring manuals for use with the various tests are now being developed in order to broaden and expedite research in this highly promising field.

The investigators have been guided by the assumption that schizophrenia involves a breakdown of, or a failure to develop, certain essential psychological capacities that are ordinarily developed in and through the family environment. These capacities include, for example, the ability to sustain attention, to use language communicatively, to develop adequate modes of perception, motor activity, and interpersonal relations, and to develop fundamental roles befitting one's generation and sex. A breakdown of these capacities appears to be closely related to the thinking disorders found in the various forms of schizophrenia. The investigators have assumed that particular patterns of communicating and thinking in family transactions have helped shape the forms of thinking found in offspring.

A pattern's effect upon the psychological growth of a child, the investigators reasoned further, might depend not only on the nature of the pattern but also on the phase of the child's development when it was exerted. It seemed reason-able to assume, as a simple example, that the developmental process had been disturbed more drastically and earlier in the case of autistic children than in the case of young adult patients. This hypothesis has now been confirmed. The parents of autistic children, the investigators report, show in their psychological tests forms of behavior that rebuff, impair, and interfere with the very beginnings of relationships with the child. In contrast, relationships in the families of young adult schizophrenics, instead of being totally shattered, are marked by impairment, blurring, and confusion.

As a causative factor in mental disorders, the investigators find that the style or form by which family members communicate is far more important than the content. Four main features of family transactional styles appear to be successful bases for describing, blindly, what the schizophrenic offspring in a family is like. These are listed as, first and foremost, inappropriate patterns of handling attention and meaning; second, styles of relating to one another, particularly erratic and inappropriate kinds of distance and closeness; third, underlying feelings of pervasive meaninglessness, pointlessness, emptiness; and fourth, evidence that members join together to deny the existence of anxiety-provoking feelings and events or to interpret them unrealistically.

Other investigators [35] report preliminary findings showing that families with normal children clarify their positions early during a test discussion, can criticize each other without losing emotional control, and complement rather than fragment the thoughts of each other. Families with a schizophrenic offspring, on the other hand, use discussions as battlegrounds, with anger, guilt, and shame ensuing. In families with a delinquent child, it is characteristic for several of the members to talk loudly above each other in order to complete their separate thoughts. The technique used in this study is that described earlier for comparing the families of high and normal IQ children.

Among other techniques being used by the Institute [36] to study what happens with families is family art therapy. In this approach, art media are used to facilitate expression and communication in families seen together by the art therapist and a psychiatrist or social worker. The analysis of the art productions of the session and of the recordings of the session has shown striking similarities in the style of thinking and perceiving of different family members. In a single art therapy evaluation session, the investigators report, the dynamics of the family, the splits and alliances, the pairing off, the delineation of roles, and the impact of parental interaction on the offspring are impressively displayed and provide an unusual field for observation often not obtainable as rapidly in purely verbal action.

A long-term study of children of schizophrenic parents is being conducted in Denmark, which has the advantages for such research of a stable population and excellent medical records [37]. Currently a U.S. investigator, part of whose work is carried out in collaboration with Institute staff, is undertaking pilot studies based on the theory that schizophrenia is a learned form of avoidance behavior. This investigator believes that the high risk preschizophrenic can be distinguished by his abnormally large autonomic responsiveness, his abnormally slow recovery from response to stress, and his excessively generalized reaction to stimuli, causing fear-producing stimuli to appear enhanced and non-fear-producing stimuli to become fear-producing. These studies have the potentiality of yielding crucial information on the relative weightings of genetic and experiential factors in etiology and pathogenesis of schizophrenic illness.

Family Factors in the Etiology of Schizophrenia

Intensive clinical analysis [38] has produced a wealth of unusual material describing the families of schizophrenic patients and has led to findings that broaden the base of current psychiatric theories regarding the psychogenic and sociogenic causes of schizophrenia. Instead of focusing on the mother-child relationship, the investigators assumed that the family as a whole is the primary teacher of social interaction and that the child's identification, self-esteem, and patterns of thought derive from the family unit.

Histories of the schizophrenic patients in this study support those assumptions; they indicate that an understanding of the symptomatology of schizophrenia—for example, of withdrawal or irrationality—must be based on a knowledge of total family interactions and behavior; they also indicate that the father's role is as important as the mother's in the emotional development of the child. (This last finding is supported by other research [39] indicating that those schizophrenic patients who had the highest probability of recovering came from homes in which the father assumed the dominant role. The investigators who made the intensive study of families with a schizophrenic offspring point out that a father should be strong enough not only to supply his family's material needs but also to represent it to the outside world and to serve as a model of masculinity to his sons and daughters.)

Among the siblings of the patients, as many were found to be psychotic as reasonably well integrated, and all except a few suffered from serious personality disorders. A definite sex linkage was found; only one sibling of the same sex as the patient was considered to be reasonably stable, and no sibling of the opposite sex from the patient was found to be overtly psychotic.

The children who became schizophrenic, the investigators found, had been brought up under circumstances that differed from those affecting their brothers and sisters. Even children close together in age and of the same sex faced different developmental pressures. Through one boy of a pair of identical twins, for example, the mother fancied she would live out the dominant, aggressive role to which she had always aspired; the other twin came to represent the passive and feminine aspects she despised in herself.

Unlike many other authorities, these investigators do not believe that a biological element is an essential factor in schizophrenia. Schizophrenia can develop, they conclude, when parents fail to carry out the tasks essential to the adequate bringing up of children. The study lists these as parental nurturance—meaning normal love and care; the proper structuring of the personality, which is achieved through a family structure in which the parents support each other, carry out the roles appropriate to their sex, and respect the boundaries between generations; and the transmission of the techniques—particularly those dealing with the ways normal persons communicate—essential for adaptation to the culture in which the developing human being finds himself. In the families studied the investigators found a failure to carry out not just one but all three of these functions.

On the basis of their findings, the investigators suggest that schizophrenia may be passed along almost as truly as certain physical characteristics, for a child who has been trained in irrationality may train his children the same way. In every family studied, at least one of the parents was judged to be seriously disturbed, and generally the problems of the parents had antedated the marriage.

In another study, investigators [40] have found more schizophrenic patients, particularly females, among the younger siblings in large families than among the older. The reasons are not clear. However, the presence of a large number of older and therefore more capable siblings in the family may be the occasion for considerable stress, especially in combination with the inadequacies reported as characteristic of parents of schizophrenic patients.

Advances in Prevention, Treatment, and Diagnosis

Significant implications for public education and for the treatment of schizophrenia have developed from the research with families of schizophrenic patients [38]. Among the approaches suggested by the investigators are premarital counseling, which might prevent two aberrant individuals from getting married. Marital counseling to help husbands and wives better understand each other and themselves may also be helpful. Another approach is to educate parents about bringing up children; the parents may still have their emotional problems, but they may do better with their children simply because of knowing what to do. This investigation points to the need for more marriage counseling centers and more family planing and well-baby clinics, and wider use of those which do exist.

A type of group therapy in which the group comprises parents of schizophrenic offspring was found particularly effective by the same investigators. Such therapy, they report, lessens the parents' feeling of guilt, gets them over the difficult period of adjusting to their child's hospitalization, enables them to see what has gone wrong in other families—and therefore what may have gone wrong in their own. Where patients can be hospitalized only a month or so, they point out, group therapy for the parents offers virtually the only hope of effecting an environmental change. Promising innovations in therapy for disturbed children and their parents are being tested by the Institute or with Institute support, and examples of these are presented in the next chapter.

Institute researchers [41] are also working on a means of making *family* diagnoses—quick classifications, according to a family's style of interaction and method of decisionmaking; these diagnoses are made at the very start of treatment instead of much later, as in the case of most research in this area to date. Such diagnoses, the investigators point out, would be of considerable help both to the therapist and researcher and might eventually make possible a carefully structured short-term family group therapy—a group therapy by prescription. Their work so far leads the investigators to believe that families can indeed be classified in this fashion at the time they are first evaluated. The procedure that has been developed will now be tested with families having various types of disturbed children.

Another Institute study [6] finds that children who became schizophrenic were rated by other family members as having been more submissive and less dominant than their brothers and sisters. This is in keeping with the finding from the twin study, reported earlier in this chapter. These differences between schizophrenic and nonschizophrenic twins and siblings are consistent with the results of a number of recent reports by investigators attempting by other means to get at the same question: How did the schizophrenic before the onset of the disease differ from the children who did not become schizophrenic? These reports picture the schizophrenic in childhood as less competent and well organized, with a lower IQ, and with a higher level of psychological discomfort and nonspecific difficulty. These apparently convergent reports raise the hope that we are making significant progress in defining the prepsychotic patterns and characteristics of schizophrenics and may thereby contribute to possibilties for prophylactic measures.

SCHOOLS

The National Institute of Mental Health supports numerous studies bearing upon the relationship between the child and the most important element in his environment except the family—the school. Included in the subjects under investigation are the processes by which the child learns basic intellectual and perceptual skills, for an understanding of these processes in the normal child is essential to an understanding of how they may be impaired in an emotionally disturbed or mentally retarded child, and of what can be done to correct the impairment or minimize its results. Also included are studies aimed at showing how, through better management techniques, the classroom experience can be made more rewarding for both teachers and pupils, and how it is possible for disturbed children, through appropriately planned therapy, to attend regular schools and benefit from their programs. Other work includes research in the exciting new field of seeking to prevent juvenile delinquency—and mental illness as well—through programs to stimulate the mental functioning of culturally deprived children, thus avoiding a waste of our intellectual resources. Examples of the Institute's research and demonstrations concerned with the child and his school are presented in this section.

Concept Formation and Language Development

Basic research to learn more about the reasoning processes of the developing child and thus to aid in understanding and treating defects in these processes is going forward at a number of centers. The work leads also to improved methods of teaching.

In one study [42], the investigator has tested the ability of children to arrive at an idea or a concept and has studied the process involved. Young children seem to go at a problem of concept formation one way; older children, another. There seems to be the same distinction between children of average and above-average intelligence. Work under way includes a comparison between children from good neighborhoods and children from slum areas. If the latter show relatively poor reasoning ability, the investigators will seek to learn whether this is because the children have less native ability or simply because, as the investigators suspect, they have had little experience—because of impoverished backgrounds—with materials like those used in the tests. In sum, the investigators are looking for scientific evidence that a lag in a child's reasoning ability may be caused by a deficiency in experience instead of in intellect, and that it can therefore be prevented or corrected. The investigators are also studying the concept formation process of retarded and disturbed children.

At another center [43], investigators have studied the strategies applied by children of different age levels to problem situations and, on the basis of the findings, are experimenting with methods of teaching children more economical approaches. Continuing research deals with exploratory behavior, curiosity, and strategies used in scientific reasoning. The work is already having an effect on school curricula, particularly in the scientific areas.

Investigators in this field have pointed out that clinical evidence indicates a hierarchy of conceptual organization within each individual. Lower orders of conceptual organization are manifest in thinking that is characteristic of dreams, psychoses, certain toxic states, and other special conditions. Higher levels are manifest in the thinking of young children, and still higher levels appear in later development. Cultural factors seem important, too. Results of a pilot study [44] of differences in concept formation by Mexican and American children, 9 to 11 years old, suggest intriguing differences between the sexes.

A number of ingenious tests for showing how much a child knows about language have been developed by an NIMH grantee [45] and are being used by several investigators here and abroad in work with aphasics, children with retarded speech and speech disorders, and children who are deaf. The grantee himself has collaborated in using the tests to help determine how much language-processing ability has been retained by persons with brain injuries. But his goal is to learn how normal children acquire grammar. This is important, he points out, because speech is the most characteristic human performance, yet little is known of the mental processes involved in its development.

A child gets his first knowledge of language from the persons close to him; he tries to imitate what he hears. But by the time he puts words together, he has begun, apparently, to induce a set of rules for their use. Before the average child is three, he has somehow developed a basic grammar. The investigators are attempting to discover sets of rules that will produce, in the sense that a program for a computer will produce, the sentences that a young child produces. The aim is to get behind the words and the sentences to the machinery that turns them out. Since the appropriate rules would lead to the same product as the child's brain, they might constitute a model of the kind of operations going on in his brain. Ultimately, therefore, this research may add to knowledge of how the brain works. By elucidating the natural language-learning process and by demonstrating how much children know about language by the time they go to school, the research may also lead to advances in our knowledge regarding the role of language in the development of human behavior. In their current research, the investigators are experimenting with a number of techniques to determine to what extent language development can be accelerated.

Children With a Learning Problem

Research interest in how children learn language has been accelerated by evidence that many children regarded as emotionally disturbed or even mentally retarded should instead be diagnosed as having a "learning problem," a condition believed traceable to an impairment in the way language is processed in the brain.

Aphasia is defined as an inability—as a consequence of organic brain injury—to understand, formulate, and express language symbols. Similar impairments are being found, however, in many "learning problem" children for whom there is no record of injury. These children, too, are sometimes spoken of as aphasic, but two NIMH-supported investigators [46] would like to see this term limited to cases of language disorders following brain damage.

Research by these investigators is resulting not only in better ways of diagnosing and treating aphasia, but also in new ideas about the understanding and use of language. In aphasia, the studies point to the existence of separate, independent impairments in the use of classes of words. For example, one aphasia victim can use comparatively few nouns; another can use nouns but apparently lacks the ability to call up the service words needed to put them together. The studies also point to the existence of separate, independent impairments in learning. Some patients can read, write, and talk but cannot comprehend speech. Some find it difficult or impossible to recognize written or printed words and, therefore, either to write or to read.

In children with learning problems other than aphasia, the investigators believe the cause is probably organic, in the sense that a certain part of the brain—a certain pathway, probably—did not develop in the usual way. Presumably the difference in the brain is so fine as to be undetectable except through the behavior it gives rise to. Some of these children have difficulty grasping or retaining what they hear; others, what they see. Others apparently can learn satisfactorily both by ear and by eye but cannot put together what they have learned by these different modes.

Through tests similar to those developed by the investigators for aphasia, such problems can be identified. Then, if teaching methods are adjusted to the individual, children with learning problems can develop without the emotional turmoil that now too often blights them and their families.

A main emphasis in several studies of learning is the effect of social reinforcement or reward—especially by an adult—on the child's responses to learning tasks. One investigator [47] finds that younger children appear to be more directly responsive than older to the adult's rewards. The older children show a tendency to become more directly involved in the task at hand; they establish their own standards for the evaluation of their performance and are not so influenced by an adult's praise.

Aiding the Culturally Deprived Child

For many of the children from low socioeconomic levels, preschool educational experience appears essential to their later emotional well-being and success in school. Consequently the Institute supports a number of programs aimed at stimulating emotional and cognitive development in the young child, supplying proof that such intervention is worthwhile, and providing information as to what forms it can best take.

One research team [48] studied abilities, achievements, personalities, motivations, and backgrounds of Negro and white children in a section of the rural South where many children do not get the idea that learning is important and for that reason, it is believed, do not develop their innate mental capabilities. This team was instrumental in getting two public-school kindergartens established—the first in the State. Among the preliminary findings: Between Negro and white children at the age of 7, in the sample tested, there are large personality differences, which tend to disappear by the age of 13 because, the research team believes, of the socializing influence of their years in school. The investigators also found that kindergarten experience leads to marked improvement in the child's adaptation to first grade.

In another southern community, the Institute supports a preschool program [49] for culturally deprived Negro children. The program emphasizes attitudes toward achievement, aptitudes for achievement, social and personal development, and improvement in general physical condition. The program also tries to improve the parents' competence through home visits by a trained teacher. After one summer's work, the children showed a significant rise in their IQ.

Another NIMH-supported program [50] is directed by a southern State's Department of Mental Health. Each year 150 preschoolers are evaluated and their parents interviewed. Children likely to have difficulty in school may be offered preschool educational experience, and when they enter school their teachers are offered expert consultation.

Children from foreign-language backgrounds also suffer disadvantages. Hence the Institute supports a new preschool program for Spanish-speaking children [51] directed toward such objectives as enhancing the child's self-acceptance, improving his ability to function in an alien culture, and reducing the likelihood that he will later drop out of school. The children will receive 3 years of special nursery and kindergarten experience. Their mothers, too, will be drawn into the program.

In another program [52] teenage volunteers under the guidance of social workers, educators, and nursery school personnel participate in a summer program for disadvantaged children. Since the teenagers come from different racial, religious and economic backgrounds, the program is viewed as providing an especially good opportunity for their own psychological and emotional growth as well as that of the preschoolers.

A major focus of another project [53] has been the establishment of a research-oriented child center offering a full day preschool program for children of 3 years and under who are primarily from low-income families and whose mothers are employed. The basic hypothesis being tested is that an appropriate environment can be programmed to offset any developmental detriment associated with maternal separation, and possibly to add a degree of environmental enrichment frequently not available in families of limited resources. The center will attempt to develop in the children powers of sensory and perceptual discrimination, an orientation toward activity, and a feeling of mastery and personal accomplishment. It is hoped that such planned intervention can help identify ways of breaking the intergenerational cycle of cultural disability so often found in low-income families.

Most of the existing programs designed to compensate for cultural impoverishment are directed toward helping the preschool child who is between

3 and 5. Institute scientists believe the programs probably should start considerably earlier, when the child is only a year and 3 months old. When infants from different socioeconomic groups and different races are tested for mental ability, these investigators report[54], no differences are found for the first 15 or 18 months. Most of the differences in intellectual level emerge between 18 months and 3 years, and the culturally deprived groups score lower on verbal than on nonverbal tests—as might be expected because deprived children receive relatively little verbal stimulation from mealtime conversations, reading by parents, and other activities.

The investigators hope to demonstrate that the intellectual performance of such children can be raised by a program of intellectual stimulation in the home, beginning when the child is 15 months old and continuing until he is 3. Under this project, children will receive flexible, informal tutoring an hour a day for 5 days a week. They will be encouraged to talk, use educational toys, and look at picture books. The tutors will encourage the mothers to continue with such activities.

Under the plans, the children and an untutored control group will be evaluated before the tutoring begins and then again several later times to determine if, when, and in what specific abilities differences emerge.

In a given social class, the investigators point out, the average IQ level that has been established during the preschool years—perhaps by the time that children are 3—is maintained. If the tutoring project succeeds in raising the average IQ score of these children of low socioeconomic status, it will have wide and deep implications not only for programs to help children—and the adults they become—make the best use of their capabilities, but also for programs to prevent delinquency and mental illness.

Classroom Management Techniques

With NIMH support, a research team [55] has been studying for a number of years the effect of specific classroom management techniques on the child's achievement and on his adjustment in the classroom. At first the investigators were primarily interested in the effects of the teacher's disciplinary techniques on the entire classroom. They found that when the teacher made it clear what she expected of a misbehaving child, the rest of the children responded with increased conformance to the teacher's demands. When she did not make her directions clear, the reverse effect occurred. Severe disciplinary techniques were followed by an increase in behavior disruption. When the teacher expressed hostility or exasperation to an individual child, the other children became upset and distracted.

On the basis of these early findings, the investigators became convinced that the disciplinary techniques employed by the teacher were not the most significant variable in classroom management. The significant question was why the misbehavior occurred in the first place. The researchers began to view the teacher's need to be punitive as a symptom of her failure to sustain motivation and work involvement on the part of the students.

These investigators have been specially interested in management techniques when emotionally disturbed children are present in regular classrooms. Teachers often express concern, the researchers point out, that such children will disrupt the behavior of others. Extensive video tape observations of activities in classrooms containing both emotionally disturbed and normal children show that the nondisturbed children do behave more appropriately than the others. However, the behavior of all the children varies with the classroom setting and work activity. In a classroom where the nondisturbed children demonstrated a minimum of inappropriate school behavior, it was found in general that the disturbed children were also better behaved. Further, in such a classroom the emotionally disturbed child's deviant acts had little effect on the children around him.

The investigators conclude that the teacher who is generally successful in managing the surface behavior of children in her classroom not only has less misbehavior among the emotionally disturbed children but also produces a classroom climate that contains the misbehavior of an emotionally disturbed child and prevents it from disrupting the behavior of other children.

An analysis of the types of teacher behavior intended to sustain work involvement and keep inappropriate school behavior at a minimum indicated that the crucial factor, with both normal and emotionally disturbed children, was the degree to which the teacher communicated that she knew what was going on and the speed with which she took action to control it. Current research activities are directed to the more fundamental question of positive techniques which the teacher can use to motivate and sustain learning activities. The final goal of the project is to develop, from the research results, better methods for training teachers to teach and supervise both normal and emotionally disturbed children. Initial results suggest that a teacher's success is related to the way in which she initiates and maintains activities both of the whole group and of subgroups within it.

From observations of children in a nursery school, another investigator [56] concluded that it was a lack of impulse control that made it difficult for the child to utilize what the school experience had to offer and made the child disruptive and intolerable to schools. Experiments are being conducted to determine the ways nursery school children control impulsiveness. Comparisons are to be made between middle class and disadvantaged children.

Creativity and the Gifted Child

Several investigators are trying to assess creativity and talent, particularly at the adolescent and college level. Efforts are being made to identify the intellectually gifted child and to study his academic and occupational progress. As one example, NIMH is supporting a followup study [57] on research begun in the 1920's on a group of gifted children, now nearing an average age of 50. Results indicate that the group has a high proportion of intellectual and scientific leaders, a low rate of mental disturbance, and a relatively high rate of marital success and satisfaction. Current research is focused on the personality and motivational factors that have determined the successful utilization of intellectual resources by these men and women. Studies of the offspring will make possible an analysis of the influence of an important parental characteristic—intellectual endowment—on child rearing.

In another study of creativity, Institute scientists [58] are following two groups of young men, totaling about 1,000, chosen from participants in the 1963 and 1965 Science Talent Searches. All demonstrate a high level of scientific competence, but the investigators have placed them in three subgroups—high, medium, and low—on the basis of their potential creativity. The study will try to learn how the salient personality characteristics of these potentially creative scientists were shaped by early experience. The work has implications for the early identification of creative individuals and for programs to enhance creative expression.

Mental Health in the Public School Program

To an increasing degree, the mental health problems that emerge in school-age children are becoming the problems of the schools.

Special classes for emotionally disturbed children have become major resources in the schools' attempt to meet their obligations to educate all children. However, a nationwide survey of public school classes for the emotionally handicapped, completed this year, revealed both a range and diversity of conceptual approaches and the lack of coordinated and adequate information about who is doing what for how many children [59].

One of the most important of the Institute-supported programs [60] aims at developing procedures for detecting and remedying ineffective functioning in the primary school child. It deals with emotionally disturbed and normal children at kindergarten through first-grade level in five public schools. Among its features are the use of volunteer teacher-aides—mature housewives—to give personal attention to individuals or small groups in need of emotional or academic support; use of mental health texts by a teacher trained in mental health principles and practices; afterschool programs—staffed principally by specially trained college undergraduates—that will include trips and special remedial projects; home-assistance programs—that is, visits to the home by mature college volunteers or teacher-aides in emergency situations; and a class for "emotional underachievers," youngsters known to be disruptive in the typical classroom situation. All the children will be evaluated at the end of their third school year.

On the assumption that periodic emotional disturbances may be reflected in variations in academic achievement, another investigator [61] has devised the Academic Progress Chart so that these variations can be readily studied. The chart has two lines—the expected progress line as shown by standard achievement test scores, and the actual progress line, which shows how the child is actually performing academically. The investigators have used the chart with 5,000 children and are analyzing the data. They believe that the new technique can be of appreciable assistance to school mental health workers. Preliminary findings show, for example, that children categorized as normal have the best record for academic stability and that certain other children, though they cling tightly to the expected progress line, are anxiety-bound and chronically distressed individuals whose margin of success is so narrow that they cannot develop confidence and freedom.

In a mental health program [62] for junior high school students, the youngsters participated in a weekly, supervised session in a nearby settlement-house nursery school. The object was to learn whether or not it was feasible to teach concepts of human behavior to preadolescents as part of a regular school program. The investigators report in the affirmative: All the participating students have shown increased understanding of the problems and behavior of young children, of the family, of parental roles, and of emotions.

School Children Who Become Adult Schizophrenics

The availability of intelligence test scores filed for years by a public school system has made it possible for NIMH grantees [63] to record new findings about the childhood intelligence of adults who are hospitalized as schizophrenics. These findings may help lead to techniques for identifying the potentially schizophrenic youngster in time to prevent full-blown development of the disease. In brief, the data reveal a decline in the IQ score long before these children were suspected of being potentially psychotic.

A gross impairment of intellectual faculties among schizophrenics, it should be pointed out, has often been observed by clinicians, and in some cases—notably in children—the differential diagnosis between schizophrenia and mental retardation itself can be a difficult one. Thus far, however, research has failed to demonstrate the consistent presence among schizophrenics of a decay in intelligence. Some investigators have theorized that even when lower intellectual functioning is apparent, it is due not to the schizophrenic process itself but rather to the fact that the disorder is more prevalent among the culturally and emotionally deprived, who, because of their disadvantaged environment, characteristically perform below the average on standard tests.

A major block in the solution of such questions has been the absence of objective data describing the *pre*morbid intellectual ability of the schizophrenic, as well as of data which would permit the socioeconomic factor to be unraveled from the disease process itself. In the present study, therefore, the investigators examined the results of intelligence tests administered to children who only later, as adults, become schizophrenic. Moreover, they compared the data with comparable measures taken of the schizophrenics' siblings who did not become victims of schizophrenia, but who obviously were products of the same socioeconomic environment. The IQ tests had been given in the second, sixth, and eighth grades.

Children who were to become adult schizophrenics showed an average drop of about 10 IQ points between early and late childhood on both individual and group tests, a statistically significant decline. A control group of normal children showed a small but not significant increase. Further, the intelligence test scores were significantly lower for those children who later became schizophrenic adults than for their siblings. On tests administered in second grade, for example, 73 percent of the schizophrenics-to-be scored lower than their brothers or sisters—with an overall average IQ score nearly 9 points lower. In contrast, the IQs of pairs of nonschizophrenic siblings showed no such difference.

When tested, the children who were to become ill apparently were not considered to be psychotic or even severely disturbed. The results thus support the thesis that schizophrenia has its roots—and its measurable effects—early in childhood, many years before the recognized onset of the disorder. Internal stresses, not easily perceived by the outside observer, may already be draining off energies required for overall optimum intellectual performance. Hence a drop in IQ scores, particularly when they are low to begin with as compared with those of siblings, may serve as a warning that a child is undergoing grave emotional stress and needs help.

The data by no means negate the importance of social and environmental factors in intellectual performance. They do, however, call into question the assumption that low scores made by adult schizophrenics on intelligence tests derive solely from the patients' low socioeconomic background or from having been reared in low-intellect families. Evidently decrements in intelligence are associated with the schizophrenic process itself.

The investigators are presently searching for clues to other early concomitants of schizophrenia. The goal is to be able to select a high risk sample for intensive study so that techniques of intervention may be identified and applied.

Identifying Potential High School Dropouts

NIMH is currently supporting a long-term study [64] of high school dropouts. Most previous investigations of this social problem have been cross-sectional investigations, and the subjects have been those who have already decided to leave school. The longitudinal nature of the current project should make it possible for the investigator to find a pattern of variables that can identify potential dropouts early in their high school careers.

The investigator identifies three major types of dropouts: involuntary dropouts, who leave school as a consequence of some personal crisis such as the death of a parent; retarded dropouts, who lack sufficient ability to handle academic pursuits and who tend to drop out prior to entering high school; and capable dropouts, who have enough ability to do the required academic work but who experience status deprivation. It is primarily this last group that constitutes a social waste.

This research will suggest situations and areas within the school milieu that are sources of frustration for students. Attention will be focused upon the individual student's position in the formal and informal structure of the school and on the status deprivation he may experience in interaction with adults and peers in the school.

It has been suggested by some that difficulties at school may provide the impetus for runaway behavior. However, in a study dealing mainly with adolescents, an Institute investigator [65] trying to learn why some of them run away from home, reports other reasons. The parents of approximately 600 youngsters who had been reported to the police as missing—and who, according to the parents, had run away—gave these reasons, with almost equal frequency, for their youngsters' actions: to avoid responsibility, or limits set by the parents, or discipline; as a reaction to limits and discipline; to embark on some excursion or project, usually not sanctioned by the parents. These findings confirm prevalent notions that running away is a strategy employed in intergenerational conflict. For information on how seriously it should be viewed, the study will analyze data from school, court, and police sources in an attempt to learn, among other things, the number of runaways not reported to the police and the courses of action, besides running away, that can be used to handle pressures. One outcome, the investigators hope, will be guidelines for differentiating between runaways whose behavior indicates a need for extensive psychological evaluation and service and those whose running away is best treated in a lighter vein.

Avenues for Applying Unused Talent

An exploratory project [66] backed by the Institute selected 10 teenage school dropouts for a 12 week training-work program to serve as "community apprentices" in one of three areas: recreation, day care of children, and research assistants. Six weeks of training at a small stipend was followed by 6 weeks of salaried employment and, finally, placement in an appropriate job. All 10 finished the course and are now placed—a remarkable example of utilization of human potential that has been neglected. As a result of the success of this pilot project, the university center that sponsored it has received from the Department of Labor an 18-month grant to expand the training program to 200 deprived youngsters and 40 young adult group leaders.

A statewide investigation [67] of high school students in a midwestern State found that in almost every comparison the high school students from rural areas were lowest in educational and occupational aspirations. The investigator was concerned with the problem of talent loss—the failure of a sizable proportion of youth with high academic ability to obtain the education and training required for positions that will make use of their talent. He found not only that rural students as a whole were lower in educational and occupational aspirations but also that the talented upper third were considerably lower than their urban counterparts. For example, for each 1,000 highly talented farm boys, the yield of college graduates was 197; for the same number of village boys, 248; and for urban boys, 301. No single factor explained the rural-urban differences. Generally, it was concluded that the school and community conditions in rural areas are not conducive to high level achievement and that the educational and socioeconomic status of the families tends to inhibit aspirations. On the basis of his findings, the investigator recommends four programs of action: improvement of rural high schools; improvement of programs for educational and occupational guidance for inschool youth, with special emphasis on including parents in the program;

development of programs for the early identification of especially talented rural youth so that they may be encouraged to develop their talents; and expansion of the availability of post-high school educational facilities to rural youth.

College Mental Health

A study clearly demonstrating the importance of high school guidance services, particularly for young people from the lower socioeconomic classes, and identifying some problems toward which college mental health procedures might be addressed has been undertaken by a group of NIMH-supported investigators [68]. The students being studied are from the lower economic and social levels. The questions to be answered are: What factors motivated them to seek a college education? What special stresses do they experience?

One of the major goals has been to identify the channels for transmitting information about college—information that in the more favored classes is traditionally handed down by parents to children. Less privileged youth are generally confronted by an environment in which going to college is the exception, not the rule, and in which strong counterpressures may be mounted against those who seek to deviate from prevailing norms.

Although all students mention that their parents have exerted a significant influence on their decision to enter college, lower class youth cite the mother more frequently as the main source of parental support for going to college; upper and middle class youth, the father. Students from all social levels credit persons outside the family with a significant role in their decision to come to college, but lower class youth mention them more frequently than other students. Of the nonfamilial influences, the high school teacher exerted the most significant influence, especially in the lower strata: Some 85 percent of these students mention a high school teacher as having played an important part in helping them decide upon college. The students had relied heavily on this adult encouragement and guidance; without it they could not have implemented their aspirations.

The academic records of the lower class youth indicated that they do exceptionally well. However, they did experience some social difficulties that were not characteristic of their middle class counterparts. Freshman counselors perceived these students as being withdrawn socially and likely to be excluded from the university social and extracurricular life. The lower class students perceived themselves in a similar way—as being alienated by their college experience; over half of them reported difficulty because they had the feeling they were nobodies.

The colleges themselves are feeling the need to reexamine and enlarge their roles as custodians and promoters of the mental health of their students. The increasing numbers of these students from heterogenous cultural and scholastic backgrounds have given rise to problems of social and academic maladjustment. In an attempt to reduce dropouts, a number of colleges are working to develop programs for improved college mental health.

At one university [69] for example, the clinical staff is demonstrating ways of identifying and treating early those students with tendencies toward emotional instability. Students are given medical, scholastic, and personality tests, augmented by a vocational interest scale. The mental health program includes psychotherapy, dormitory-counselor conferences, close cooperation between academic counselors and psychological services, and a program in mental health education.

In work expected to provide important baseline data, another university [70] is utilizing its health services toward an improved understanding of late adolescent development and a study of the university as it relates to the needs of the students. Students are evaluated by tests and interviews in terms of their stage of emotional development, and rated on their personality strengths and weaknesses. Concurrently, the social structure of the college, its values, and its expectations toward students are under study, as are the formal and informal facilities in the college for alleviating strain in the students. The project will contribute much new information on personality development in gifted young men, on the impact of social systems on personality development, and on ways for colleges to enhance the social and emotional growth of students during this crucial phase of their lives.

Another project [71] is reexamining 12 small liberal arts colleges in terms of: goals and programs, kinds of students enrolled at each school, characteristics of students who withdraw, and the changes that occur within remaining students. The results will assist the faculties in assessing similarities and differences between their attitudes and goals and those of the students, many of whom come from culturally deprived backgrounds, and in considering possible changes in programs and practices.

The Institute has also supported a program [72] which offered an intensive treatment facility to the bright underachieving student who dropped out of college. Of 62 colleges contacted, the greatest responses came from those with a larger number of relatively low income students, and those with minimal on-campus psychiatric services. The investigators hope to evolve a typology of dropout students, which could be of help in stemming the high rate of attrition.

Research [73] using medical records of approximately 1,000 university students has provided information on the relationship between psychological health and resistance to physical disease. About half of these students were young men and women seen in the psychiatric outpatient clinic. Their psychiatric diagnoses ranged from situational maladjustments to schizophrenic reactions. The other half, the control group, were students who had not been seen in the psychiatric clinic.

As could be expected, many more psychiatrically treated students than controls had complaints that could be categorized as anxiety. Also, however, many more of them had complaints of headache, gastrointestinal disorders, gynecological disorders, neurological disorders, allergy, inflammations, upper respiratory infections, obesity, tumors, and trauma. In sum, psychiatric patients were more likely than the controls to have not only disorders commonly characterized as psychosomatic, but also disorders traditionally regarded as somatic. The investigators conclude that the psychiatric patients in this study visited medical clinics more often than controls because the former suffered a greater frequency of "real" illnesses. The relationship between the psychological and physiological aspects of adaptational failure, the researchers suggest, may be more general than specific. A reduction in psychological adaptive capacity, such as occurs in psychiatric illness, may be paralleled by a modification of physiological adaptability. An understanding of the qualitative and quantitative aspects of this relationship requires much additional research.

Employment Opportunities

Counselors in a school system's vocational and educational guidance centers—and, of course, teachers themselves—can exert a significant influence on a child's goals and on his plans for attaining them. Various Institute studies that seek a clearer understanding of the factors making possible a satisfactory vocational choice should help counselors and teachers exert their influence most effectively.

A center [74] devoted to research in careers, including how they are chosen and how a satisfying career is developed, was recently opened under Institute auspices. The research being conducted there is based on the general philosophy that occupation both reflects personality and affects it, and that the great diversity of the occupational structure of this country should make it possible for every person to be an effectively functioning and meaningfully contributing member of society. But if this possibility is to be realized we must know a great deal more about the elements that go into the development of a satisfying career, the crucial points at which choices need to be made and how they are made, and we must have clearer conceptions of how occupations, values and needs relate to one another.

Approximately 40,000 persons who were graduated in June 1961, from 135 American colleges and universities are being studied [75] to throw light on the career aspirations of college graduates and the processes that facilitate or hinder the carrying through of their plans. This research is applicable to policy needs in the area of manpower and talent allocation. The data will show from what segments of the college graduate population potential scientists and professionals are recruited, and where talent is being "wasted."

Early Help for the Disturbed Child

INTRODUCTION

The campaign against child mental illness and for improved mental health among our youth is best fought and won in the child's natural environment, with resources such as those discussed in the previous chapter. There are many children, however, who have been failed by these primary preventive resources and for whom special mental health services now become necessary. The latter represent a second line of defense, intended for the most part to help the troubled and troublesome child remain a functioning member of the community while being treated. The aim is to provide early help for the child suffering a mental or emotional disorder, thus forestalling more serious crises and institutionalization, and, hopefully, returning the child to a normal and productive life.

The range of services under consideration here is broad. It includes treatment by pediatricians and general practitioners; treatment in general hospitals and at outpatient clinics; and a combination of treatment and education in special classes and special schools. Included also are the services of welfare agencies, whose workers are often the first to detect existing or impending emotional illness and to bring help to the afflicted person and his family. And, in the case of delinquent youngsters, the services encompass the work of court personnel, training school staffs, and probation officers.

Improvement of these services depends both upon advances in knowledge and upon demonstrations of how these advances can be applied. Consequently some of the examples presented in this chapter deal with research to get answers to what we don't know, others deal with applications of research findings, some deal with both.

At one end, the work reported here overlaps the studies discussed in the preceding chapter, concerned with the child in his normal environment, and at the other end, those reported upon in the next chapter, concerned with the youngster and the emerging adult in institutional care—for example, in the mental hospital or in prison. This overlap is to be expected. In mental health efforts, whether predominately research or predominately service, it is difficult and often impossible to draw hard and fast lines between areas. Neither the child's behavior nor our mechanisms for responding to it are discrete and isolated; they are arrayed along a continuum. An adolescent may move from his intolerable family life, to a delinquent gang, to a hospital for drug addicts with alarming rapidity. In response, our mechanisms for attempting to restore the child to normal society must also be mobile and continuous, varying—to follow the same example—from strengthened family life, to street corner social work, to rehabilitation efforts in the hospital, and often all of these in combination. Similarly, productive research is not limited in its potential relevance but may provide insights along the entire range of child problems and lead toward a variety of solutions.

GENERAL HOSPITALS, OUTPATIENT CLINICS, AND WELFARE AGENCIES

Those who provide services to children in hospitals, clinics, and welfare agencies are better able than ever before, thanks largely to research findings, to diagnose and treat child behavior disorders. But many questions remain unanswered, many children with emotional disorders are not identified and treated early enough, and for a variety of reasons many children are not, or cannot yet be, treated effectively. Projects directed toward improving services to children through improving diagnostic techniques and treatment methods are going forward in a number of therapeutic settings. Some of the projects are discussed in this section.

Studying and Treating the Disturbed Child

One of the clinical research centers supported through the Institute [76] is concentrating its efforts upon understanding and treating the young schizophrenic child. Research in progress includes precise descriptions of the child's behavior in relation to people and objects; physiological and neurological studies of the endocrine and nervous systems; studies of the critical antecedent conditions producing clinical symptoms; and studies of a variety of treatment procedures.

A recent study conducted at this center compared EEG tracings from psychotic children with tracings from normal children. The question was whether or not organic correlates of a child's disturbed behavior could be detected. Of the disturbed children, 53 percent had abnormal EEG patterns; of the psychiatrically normal children, none. Abnormal functioning was inferred from the EEG tracings of the schizophrenic children, but whether it is a primary contributing factor to the disorder or an effect of prolonged anxiety on the body chemistry remains a question for further study.

With NIMH support, a psychoanalyst [77] is working on new means of assessing psychopathology in childhood. She and her associates at a clinic are attempting to construct, at various stages, psychological pictures of the child, utilizing psychodynamics, social, genetic, and adaptive data. Since the profile includes information on both the ill and the healthy parts of the child's personality, the investigator believes it can contribute to knowledge about normal variations and indicate deviations before pathologic formations occur. One of the questions under examination is the usefulness of the profile's measurement of frustration tolerance in predicting chances for spontaneous recovery and for favorable reaction to treatment.

A number of community demonstration projects supported by the Institute are directed toward helping the disturbed child. One unique project [78] studied the effectiveness of a total treatment program—intensive therapy and casework services—for children placed in foster homes by public welfare agencies. These children, whose initial foster home placement had been dictated by parental neglect or abandonment, had developed serious emotional problems growing out of the difficulties of separation from their own families. It was found that for these dislocated children neither psychotherapy nor casework was of significant help. The investigators concluded that the unstructured foster home situation, where possible ambivalence toward the children or rejection of them existed, exacerbated rather than ameliorated their problems of identification and confusion about family relationships. The foster home simply did not simulate a normal family situation with sufficient fidelity to allow the children to make constructive use of therapeutic services.

The development of the day hospital treatment program—a community alternative to institutionalization—is fairly recent. One of the earliest programs was started with NIMH support in 1959 when a child guidance center expanded its services to accept children on a full-day patient basis, recognizing that outpatient care was inadequate for certain of the behavior disorders of children and that residential treatment was disruptive to the child's life.

This project [79] provides daycare service to children ranging in age from preschool through adolescence. The therapeutic environment is structured by the staff to present constant opportunity for the children to have the pleasures of learning and of mastering skills which contribute to psychological growth. To facilitate their acting on these opportunities, special care is taken to provide them protection from social and psychological dangers. The basic program includes a small group educational program based on the needs of each child, arts and crafts, recreation activities, and individual psychotherapy. A "nurse-housemother," a nurse with psychiatric training, in addition to her nursing functions acts as a mother in meeting the children's needs such as help in eating or dressing. Parents also receive treatment. They are seen at least weekly and the staff may be in telephone communication with them as well.

This program of treatment has been found particularly beneficial to children whose disorders or family circumstances are such that the school, court, and other community programs ordinarily available could not maintain them in the community.

The day program has also yielded significant benefits for the total community mental health program for children: training programs have been strengthened and enriched, a laboratory for research with severely disturbed children has been provided, and other community agencies, schools, and citizen organizations have received the benefit of consultation services of the staff.

Elsewhere the staff of a child guidance center [80] has been treating severely troubled adolescents in an outpatient individual and group therapy program. Interviews with parents, both separately and in the company of the patient, have increased their cooperation and their understanding of the problem. At first, most of those referred to the clinic were delinquent adolescents; now they are marginally adjusted adolescents, a shift believed to increase the likelihood of early diagnosis and minimal treatment.

Flexible workshop treatment is provided by another project [81] to mentally ill older adolescents and young adults admitted from four sources: private mental hospitals, a State mental hospital, a municipal psychiatric facility, and a residential treatment center. The center provides sheltered workshop training with close supervision by psychiatrically oriented vocational counselors, social workers, psychiatrists, and physicians. Followup case history data will be collected for each year up to 5 years. The project directors hope that an analysis of these documented experiences will shed light on rehabilitation relationships and techniques that can be useful in restoring the severely ill adolescent's social competence.

Other grants for mental health clinics cover group therapy with autistic children; crisis-focused treatment; integrated physical-mental treatment for nonreferred adolescents; and therapeutic clubs for culturally deprived boys.

Another Institute supported enterprise [82] uses college students through the school year for work with troubled children in rural areas. These are children, from 4 years old to 16, suffering from feelings of inadequacy because they have only limited contacts with other children and poor relationships with adults. Student volunteers have visited the children weekly, walking and talking with them, sharing sports activities, and offering projects in arts and crafts. The program is based on the hypothesis that "relationship therapy," offered by young and enthusiastic volunteers, can be of value to emotionally disturbed children.

In a southern city another project [83] involves looking backward in order to develop suggestions for improving services to the emotionally distressed child and to promote a deeper level of understanding of destructive processes within the community itself. Here the investigator will make a detailed examination of all the records pertaining to more than 400 severely disturbed Negro children treated at an educational therapy center in the last 20 years. Through an analysis of the reports of psychiatrists, social workers, teachers, and psychologists, it is hoped to arrive at improved methods of prevention and treatment for the years ahead.

A number of projects are demonstrating how children with various types of physical handicaps, which can make them more vulnerable to emotional disorders, can be helped. As examples, one investigator at a child guidance center [84] is studying juvenile diabetics to determine the most effective medical and psychiatric treatment. Another investigator [85] is working with visually handicapped children who, because of emotional difficulties or mental retardation, are not able to use the usual community facilities. He is developing a demonstration mental health center that will provide for these children diagnosis, treatment, socialization, and prevocational training. A third investigator [86] is studying conditions under which children who are eligible for adoption but have various physical and mental handicaps can be successfully placed with adoptive parents. A major result should be a set of criteria that social workers can use in guiding the placement of such children.

The problem of neglected and abused children—specifically, in this case, hospitalized infants with traumatic injuries—is being studied by another investigator [87]. Previous studies have tended to suggest that abused children are raised in families with inadequate housing and poor wages. However, during the first 2 years of this grant, study of the families revealed rather stable marriages, financial independence, and moderate education. The significant factor seemed to be a paucity of connections with community groups.

Of interest and importance to many cities through the Nation is a demonstration community service for the unwed pregnant adolescent [88]. The girls being helped and studied have become pregnant while in elementary school. Their parents participate in the program, which includes educational, medical, nursing, psychiatric, and social work services. Services are continued after delivery, and provisions are made to keep the girl in school. As a result, the girls are able to make productive use of the educational and counseling facilities.

Among mental health personnel, there is a growing awareness of the problem of suicide among our youth. From the known annual suicide statistics, it has been estimated that suicidal adolescents and children represent from one half to 3 percent of all suicides. Accidents are listed as the chief cause of death in 15–19 year olds; suicide is the fifth ranking cause of death in this age group. There has been an increasing awareness of the fact that a large percentage of suicides, perhaps up to 50 percent or more, are disguised or not reported for various reasons. It has also become evident that there are others who commit suicide by "accidental means."

In a recently completed investigation [89], staff from the Los Angeles Suicide Prevention Center clinically studied 19 young patients in whom suicidal tendencies were a major problem. Several characteristics were noted in this group of 19 children and adolescents ranging in age from 7 to 19. Fifteen attempted suicide one or more times and four seriously threatened suicide. These 19 patients under study were almost equally divided between the sexes, and the majority were in the 12–19 year old age range.

In each patient studied, some form of early childhood self-destructive behavior or depression which extended into later years was prominent in the clinical history. The investigator also found in each case that there was a history of a parental attitude of an intense degree of ambivalence toward the child, frequently weighted in the direction of unconscious resentment, hostility, and rejection. About one half of the children were born into homes where the mothers were unable to accept them readily. In two cases, there was a history of severe marital discord, illness, economic stress, or permanent abandonment by the father. In more than half of the cases, one or both parents had unconsciously conveyed a feeling that the child was a burden. Clear beginnings of this attitude in infancy were noted in ten cases. In the majority of instances this attitude was expressed by a coldness or hypercritical discipline or by an absence of mothering concern.

The youngsters studied were classified into two groups. A group of four were characterized as quiet, withdrawn, chronically depressed, schizoid children. Parents who seemed to reject the parental role most completely were more likely to have depressed children. The other group consisted of 15 youngsters (8 boys and 7 girls) who were frequently described as hyperactive infants or children, more than half being characterized by the mother as "anxious or difficult to handle, never satisfied" in their earlier years. As older children, they were described as generally hostile and aggressive, acting out or openly delinquent. Two-thirds of this group were reported to be school problems. Those mothers whose distaste for the mothering role was accompanied by guilt or remorse were found by the investigator to tend to have children who were misbehaving, frequently delinquent, and often chronically self-destructive.

However, the study showed that these two groups were not always distinguishable from each other. There were overlapping symptoms—especially for youngsters in the second group who experience periods of depression characteristic of the first group of children.

Psychological Factors in Childhood Asthma

Asthma results from a combination of somatic and psychological factors and is a particularly incapacitating disorder when suffered in childhood. Knowledge of which factor predominates in an asthmatic patient can facilitate diagnosis and treatment. NIMH-supported investigators [90] have developed a diagnostic scale by which they can determine if the individual is suffering from asthma caused primarily by somatic factors. This scale is a composite of ratings of family history of allergy, blood eosinophile percentage, skin test reactivity, total number of allergies in the patient, and ease of diagnosing specific allergens. Asthmatic children were rated on this scale and divided into high-scoring and low-scoring groups.

The children who scored low on the scale, indicating that constitutional factors were not the primary factor in their asthmatic condition, were found to be suffering from psychological stress. More psychopathology was found in mothers of children in this group and more conflict was observed in their marriages. The mothers appeared to over-identify with their child in the sense that they were overly dependent on the children for satisfaction of their own needs.

The results suggest that the rating scale can be a valuable guide for the differential diagnosis and treatment of asthmatic children. It may also be useful as a basis for further research in the psychopathology of allergy.

Drugs in the Treatment of Disturbed Children

Psychopharmacological drugs offer new opportunities of treating emotionally disturbed children, but much information is still needed on the effects of specific drugs on specific children. To obtain a trustworthy measure of a drug's effect in emotionally disturbed children, an NIMH investigator [91] has found it necessary to divide such children into groups differing in the severity and quality of their psychopathology.

In a pilot study, most of the more severely disturbed children improved on chlorpromazine, a widely used tranquilizer; about half improved on another drug; none improved on placebo treatment. Among the other children—mainly neurotic and sociopathic—the effectiveness of chlorpromazine, in terms of the percentage of children who improved, differed little from that of a placebo. Improvement in the first case seems to depend primarily on the effectiveness of the drug being studied; in the second upon such factors as hospitalization, psychotherapy, special education.

This research team has confirmed that a child's response to a psychiatric drug may be quite different from that of an adult. For example, trifluoperazine, a tranquilizer having less sedative action than chlorpromazine, has been found to be a stimulating agent when given to retarded schizophrenic children and to be capable, on the basis of preliminary findings, of bringing moderate improvement. Other drugs are being tried in the hope that even more potent agents will be discovered.

The investigator estimates that at least 60 percent of severely disturbed children can be moderately improved by presently available drugs. Among children in an outpatient population who were too disturbed to benefit from psychotherapy, drugs enabled one fourth to go to regular schools and another one half to participate in group activities and special classes.

Special screening of drugs potentially valuable for disturbed children is essential, the researchers report, because a drug's action may depend upon the stage of the child's development. Quite possibly, drugs that are ineffective in adult animals or human beings may prove valuable for children.

The researchers also point out that dosages of psychopharmacologic drugs must be determined separately for children and not merely adjusted from adult dosages according to body weight. A dosage that has been scaled down in this manner may be so high for a child as to cause toxic symptoms. Or it may be so low as to be ineffective.

Observations by this group suggest that increased dreaminess, apathy, and lethargy are associated with poor prognosis and greater mental retardation. If drugs given at an early age could increase the responsiveness of such children, then psychological and educational methods of treatment might be more effective.

The group has developed rating scales that make it possible to define the severity of a child's illness in terms of the deviations from normal development for children of his age. These deviations in development are the "target symptons" for treatment; the effectiveness of treatment is measured by the degree to which they can be altered to approach the norms for the child's chronological age. Preliminary results suggest that only children who show a significant improvement in communicative speech will eventually show a significant overall improvement in ultimate outcome.

Work by another grantee [42] emphasizes again that a disturbed child's condition must be accurately diagnosed if the child is to receive the most effective treatment. Early studies showed that neurotic children—generally described by mothers as shy, fearful, introverted, anxious, inhibited—usually improved when treated with a placebo and brief psychotherapy. But this regime usually had no effect on hyperkinetic children—overactive, distractible, and often accused of being aggressive because they can't keep their hands to themselves. A stimulating agent did seem to help the hyperkinetics. In no one of three outpatient studies with disturbed children were the effects of tranquilizing drugs evident.

Recent research by this investigator and his associates has confirmed the usefulness of brief psychotherapy for one type of disturbed youngster and of a stimulating agent for another. In this study, brief psychotherapy is defined as a history-taking and evaluation interview and five additional interviews lasting from 45 minutes to an hour. During these periods the child was seen by a psychiatrist, and one or both parents by a social worker. After 8 weeks, the neurotic children in the psychotherapy group were found to have made significantly more improvement than those in a control group (who, with their mothers, received only the initial interview—during which the mothers were simply given advice tailored to the case and were assured that the child's condition would be checked again after 8 weeks).

In the drug phase of this new work, half of a large group of hyperkinetic children were given Dexedrine (dextroamphetamine), a stimulating agent when used with adults, and half a placebo. At the end of the 8-week period, those who had been receiving the drug were rated both by clinic personnel and by teachers as showing significantly more improvement than the others.

The investigator is especially interested in the results of the Porteus Maze Test, which calls for the subject to trace his way, with a pencil, through a series of mazes of increasing difficulty. When a child enters a blind alley, he is scored as having failed on that maze even though he backs out and continues in the right direction. An impulsive child, then, is likely to score low. Both groups of hyperkinetic children made poor scores at the beginning of the study. Eight weeks later the placebo group showed no improvement, but the scores of the Dexedrine group shot up about 15 points.

Interestingly, the children with the lowest IQs—all of which were within the normal range—showed the greatest improvement in the maze scores. Children with relatively low IQs, the grantee explains, may have a better potential than the IQ scores indicate. They may not be using it because of their inability to pay attention and to control their motor activity. These are the children who may be helped most, at least in the skills demanded by the maze test.

The grantee and his associates are now trying to learn just what happens psychologically and physiologically to disturbed children given medication. A major problem with the hyperkinetic youngster and with some other children as well, they point out, is the inability to sustain attention in school. Obviously, if a child isn't paying attention, he isn't going to learn. The researchers have now worked out a way of measuring the attention span. Once they have baseline rates for disturbed children, they propose to test a variety of psychiatric drugs to learn if the attention span can be favorably altered. If the plan works out, the group will have a way of telling beforehand which kind of drug will affect a given type of child most favorably—that is, in respect to this particular measure.

This group's negative results with tranquilizers will make for a considerable reduction, the researcher believes, in the use of such drugs for children. He takes the position that no child should be put on medication unless there is a clear need for it and clear evidence that the medication is likely to produce results. He feels that the tranquilizers have been considerably overused for behavior disorders. For the usual child who comes into a psychiatric outpatient clinic he finds little evidence that most tranquilizers are of any benefit; with the schizophrenic child, the story is different.

The investigator also feels that in the treatment of disturbed children of the neurotic type, much more emphasis should be placed on brief psychotherapy as opposed to psychotherapy that continues indefinitely. With brief psychotherapy, he points out, a community can spread its psychiatric personnel further and thus reach more people. Further, there is some evidence of fewer dropouts.

Bringing the Family Into the Therapy Picture

A highly promising means of prevention and treatment that NIMH has helped to pioneer is the field of family therapy. Projects here aim to develop and test clinical methods for improvement of interpersonal communication within families, and to show how modification of environmental factors may serve to modify a child's behavior. In a number of States the mental health staffs of school systems are utilizing the new family interview techniques with parents of children having behavior or learning problems. This practice has proved helpful in focusing on the personality problem inherent in behavioral and academic lags.

Under one Institute grant [92], private outpatient clinic-research facilities were provided to 25 families, each with a schizophrenic child. Treatment was oriented toward conflicts and miscommunications currently observed in the family. The families were seen, on the average, weekly for 12 months.

The rationale for this type of treatment is that intervention should be directed toward current interpersonal manifestations rather than toward those long buried in the patient's history as focused upon in traditional psychotherapeutic theory. Two important results have emerged. Staff evaluations have concluded that the need for hospitalization of patients seems to have been reduced, and that both the identified patients and their families have shown considerable improvement. Because of the apparent success of this program, the Institute is now engaged in training family therapists for other social service agencies.

In a new approach to family therapy, Institute researchers [41] are employing—and studying the results of—"multiple family group therapy." Each group consists of three adolescents and their parents. The adolescents are boys who have been doing much less well in school than their capabilities warrant or who have been manifesting such behavior problems as truancy, destructiveness and stealing.

The investigators hypothesized that such an approach would combine the advantages of traditional family group therapy—which aims to make constructive use of the power family members exercise upon one another—and of traditional group therapy, through which members of the group can challenge, support, desensitize, and educate other members. It is the investigators' clinical impression that the hypothesis is being proved correct.

Another approach [93] is called "multiple impact therapy." Under it, brief, intensive, outpatient treatment has been provided for families in crisis because of a disturbed adolescent. Necessity gave rise to the idea; many families were far from treatment resources, and in any event these resources were limited. A treatment team, plus a social scientist, held group and individual sessions with the family 6–7 hours per day, for 2–3 days. The sessions were taped and replayed to study and clarify misunderstandings. The significant departure of this project was the use, not of an individual social worker but of a team of members who often disagreed openly—demonstrating mature handling of conflict for families, and encouraging families to make their own independent judgments. Since some families can best be reached at peak time of motivation, which in this case was imminent institutionalization of the adolescent, the refinement, understanding, and teaching of this multiple impact therapy could help expand the reach of available personnel and provide a technique that will reach many families in distress who are not amenable to traditional approaches.

Looking for new and more efficient ways of working with people who are in trouble, another investigator [94] has proposed "filial therapy"—a technique that uses parents as therapeutic agents with their own children. Hopefully, it will make professional psychotherapeutic resources go further.

In this type of therapy, parents of young children are taught, in groups, to conduct play sessions with their children. After training, parents continue to meet weekly with the therapist to discuss the results and to draw inferences about their children and themselves. The sessions between parents and children take place at home, beginning with one 30-minute period a week.

On the basis of work with several groups, the investigator reports that: parents' motivation is high; most play their session role well; the children are responding with significant emotional release; and a number of parents have reported great improvement. Quantitative studies of the method are planned.

Children With Mentally Ill Parents

The family is the basic unit of society and mother and father the basic unit of the family; the basis of normal development is the actual presence of both parents. Children with hospitalized parents suffer severe disruption, particularly those from lower socioeconomic groups living in large urban centers where there is a minimum of family resources, in terms of both finances and neighborliness. An investigator [95] studied 50 families of hospitalized parents from 14 small towns, and reported that over half the children were experiencing difficulties: neurotic traits, health difficulties (nearly 40 percent of the children had been hospitalized during this period), behavioral and school problems. A "community intervention" scale was devised to measure the effectiveness of the community's agencies in meeting child care needs. A proposed study will attempt to determine if different services are required for urban areas, and to prepare a design for more prompt and effective involvement of community services.

In work supported by NIMH [96], a general hospital clinic offers combined physical-mental health services to adolescents whose families are at the lower socioeconomic levels. Admission to the clinic is for medical complaints only. Psychological services are woven into the program in such a way, however, that they reach the adolescents who need them, but who do not recognize or admit that they have problems aside from, and possibly contributing to, the physical ones. Thus, the investigator reports, many emotional problems are found and dealt with before they become disabling or deeply entrenched. A major reason for the clinic's success lies in its provision of comprehensive services without a long chain of referrals, which lower class adolescents would not be likely to follow. The clinic fills such an evident need that at least three similiar services are being modeled after it in other places.

A new study by the Institute's Office of Biometry in collaboration with Johns Hopkins University has compared the experiences and environment of children who are or have been psychiatric clinic outpatients with those of other children. Some significant differences were found. For example, 18 percent of the clinic patients had suffered a long, disruptive separation from their mother and 33 percent from their father, as compared with 4 and 18 percent, respectively, for the control group. Again, only 50 percent of the clinic children were living in intact and happy homes, as compared with 74 percent of the controls. These and other findings of the study reemphasize the importance of the family, and of the social and economic conditions affecting it, in preventing mental illness.

SPECIAL SCHOOLS

Many emotionally disturbed children can be accommodated within the public school system—either in regular classes, if the teacher is a mature individual and acquainted with mental health practices, or in special classes. For severely disturbed children, however, special schools using new techniques are likely to be essential if hospitalization is to be avoided. The Institute supports a number of projects to explore methods of helping such children progress toward normal health in an educational setting. Deeply concerned with the educational problems of retarded children as well, the Institute also supports a variety of research efforts to help such children develop their capacities to the fullest, and thus to live as independently as possible.

Treating Disturbed Children in Nursery Schools

The nursery school as a treatment resource for the emotionally disturbed young child is still in a fairly early stage of exploration. But a number of programs supported at least in part by NIMH have reported promising results.

One program [97] experimented with group psychotherapy techniques for disturbed, nonverbal, obsessive children who could not be kept in school. After a 6-month period, of the 50 children in the project, 28 were able to enter individual therapy and remain in full-time school attendance. Local support is now keeping this service on a continuing basis in recognition of its value to the community.

Another investigator and his associates [98] are working with antisocial children from 3 to 6 years old and their parents. The children are essentially dropouts from regular nursery schools. All of them meet at least two of these criteria: such behavior as stealing and running away, hyperactivity or unmanageability, activities that have brought complaints from neighbors or a nursery school. The program for the children includes psychotherapy and nursery school at the child guidance clinic where the project is being conducted; the program for the parents includes casework. The investigators report that the parents in general have encouraged the antisocial behavior of these children, though the parents themselves had rarely engaged in such behavior. The information being collected will deal not only with the changes in therapeutic techniques necessary to reach these families but also with parental influence on a child's antisocial development.

A nursery school for schizophrenic children was established, under another NIMH-supported program [99], as part of an existing day care center. The emphasis was on the educational program, therapeutic efforts depending to a great degree on the attitudes and skills of the teacher. Formal psychotherapy, if any, was arranged for privately, but a group therapy program for parents was formed. Without this special nursery school, the psychotic children who attended it—they ranged in age from 3 to 6—would have been institutionalized.

In a different approach [100], a small group of psychotic young children—all less than 2 years old when the program started—meet for 3 hours twice a week with two therapists at a child guidance clinic. Interaction is fostered through the use of food, a toy or two, and march music. When the child is able to relate to other children, he attends a regular nursery school in his own community on the days he does not come to the clinic. The parents have group therapy sessions. The investigator finds that group therapy for very young psychotic children is both feasible and effective; children who participated in a previous pilot project are all in school and living at home.

Education for Child Schizophrenics

Notable among the efforts in this country to aid severely disturbed children of school age is the work of an Institute grantee, an educator, directed mainly toward schizophrenics [101]. In the first phase of the program, young children, ages 6 to 9, with schizophrenia or other severe disorders were provided with classrooms in a community center. There was a room for every two children, and for each child there were two "teacher-moms"—carefully selected mothers who were warm, mature, empathic, emotionally stable, and dedicated. They had been briefed in basic teaching techniques—considered a less important qualification. Special equipment was provided by community organizations; transportation, a teacher supervisor, psychological and psychiatric consultants, and books and supplies, by the board of education. Academic subjects included arithmetic, reading, oral expression. Group activities included arts and crafts, music, physical education, and storytelling. Programs were changed to meet a child's changing needs. Of 21 children aided by the project during the first three years, 11 have been successfully returned to regular classrooms full time; one, part time.

The investigator has recently established two similar programs in widely separated communities, plans to establish a third, and has been asked for help in starting a fourth. One community plans to follow the pattern with children of junior high school age. The work suggests that a joint effort of educators, clinicians, and community leaders holds out great hope that many of our 500,000 severely disturbed children, few of whom now receive education or habilitative treatment, can be helped.

Teaching the Mentally Retarded

For a number of years, NIMH investigators have conducted extensive research on aspects of learning in mental retardates. They have also conducted analyses relating the intelligence of mentally retarded children to their capacity to be trained. A general goal of the work is to develop improved procedures for teaching the retarded.

One of the most important dimensions of the learning situation for the mentally retarded—especially those who live away from home—is social reinforcement, or reward, offered through contact with an adult. This finding in a number of different studies calls into question the commonly held view that a retarded child differs from other children in certain immutable ways beyond his intellectual deficit. That view originally received some support from experimental results showing a more rigid behavior by retardates than by normal children of the same mental age on concept-switching tasks (such as grouping objects by color and then noticing that they can be grouped by form, too). Recent work by an NIMH investigator [102] with middle class normal children, lower class normal children, and institutionalized retarded children—all three groups having the same average mental age, 6.9 years—indicates that the results of such an experiment depend upon how the subjects are motivated. Middle class children, the investigator theorized, would perform more effectively when given an intangible reward—simply the instructor's voiced approval for having done the job right; on the other hand, lower class children and retarded children would do best when offered a tangible reward—tokens to be exchanged for a prize. When each group received its own best reinforcer, the researcher predicted, there would be no difference among the three in their ability to switch concepts. In general this proved to be so.

Research with retarded children, the investigator emphasizes, must allow for the social deprivation and other differentiating factors in their experience. Their rigid behavior in certain situations—for example, their perseverance in playing a monotonous game—is due not to innate rigidity but to a heightened desire, springing from social deprivation, for the support, approval, and continued attention of the adult observer.

Investigators [103] have also studied the effects on children's motivation when peers act as reinforcing agents. This work was stimulated in part by the observation that retarded children placed in a regular classroom tend to be rejected and isolated by their normal peers. The new work was conducted with normal and retarded boys and girls attending the same classes, first through third grade, in an elementary school. Each child who participated served first as the subject, then as the examiner on a simple motor performance task called the Marble Game. The child acting as examiner was instructed by a flashing light when he was to make a positive statement to the other child about that child's performance. Any pair of children acting as examiner and subject were from the same classroom, so both children knew each other's relative intellectual status in the classroom hierarchy.

Both normal and retarded children were more responsive when a classmate of average or above average intelligence was the examiner. This finding bears out the common observation that children place more value on a supportive statement made by a normal child than on one by a subnormal child. The difference in performance was much greater for girls than for boys; the performance of normal girls actually declined when reinforced by a retarded classmate.

Retarded children, on the other hand, were not as greatly influenced by the intellectual status of their examiner. The opportunity to perform before another interested child appeared to be the important factor.

Among other factors to be considered in interpreting the behavior of mental retardates is the degree of test anxiety and defensiveness they experience. Four groups of children were rated for their anxiety about a test situation—normals living at home, mental retardates living at home, normals living in an orphanage, and mental retardates living in an institution. The investigators conclude that the retarded child, in or out of an institution, is functioning with a higher level of anxiety than the normal child, and that changes in environment apparently do not affect his attitudes about test performance as much as they do the normal child, who is markedly more anxious if he lives in an orphanage than if he lives at home.

In studies of trainable imbeciles with mental ages between 2 and 7, investigators [104] found that speed of discrimination learning is a function of problem difficulty, novelty, and size of cues in relation to their background. Retardates studied by these investigators were found to be particularly slow in forming some simple visual habits, even slower than expected from their low mental age. The secret of successful training of moderately retarded children, therefore, seems to lie in getting their attention through increasing the attention value of the relevant cues. Mental age scores proved to be good predictors of speed in learning.

For teachers of children like those studied, the findings lead to suggestions for using large, three-dimensional letters and numbers that differ in color as well as form, delaying training with small, flat, black-printed figures until the others have been learned; adding novel-appearing aspects to objects that are difficult to discriminate; and spending more time on training-in correct responses than on training-out wrong behavior—that is, emphasizing what the child is supposed to do rather than what he is not to do.

Automated teaching techniques are used with retardates in several new studies, one of which focuses on programmed learning for retarded blind children [105] and another [106] on the application of programmed instructional materials in reading. Through the use of these techniques, the investigators expect not only to help the particular children they are working with but also, by exploring the learning processes of these children, to provide information valuable to all those concerned with helping the mentally retarded.

Little effective learning and growth are possible when emotional problems intervene, and therefore the Institute also supports a variety of research on the adjustment problems of the retarded child and his family, and in one community it supports an information and consultation service [107] that aims to improve the use of existing services for the mentally retarded and to assist in the expansion of services.

In work of potentially great practical significance, a newly established clinical center is studying some 4,000 mentally retarded persons, hospitalized during 1945–60, in terms of their physical, mental and behavioral characteristics before, during, and after hospitalization, and in relation to the medical and social characteristics of their families [108]. The findings should sharpen prognostic techniques, furnish bases for hospital and community program development, and supply source data for further medical, psychological, and sociological research. Thus the early diagnosis and treatment of emotionally disturbed or retarded children should be vastly improved.

SOCIAL FORCES IN DELINQUENCY

The problems of juvenile delinquency can be dealt with most effectively if the courts, the police, the schools, social service agencies, psychiatric clinics, other groups concerned with the community's welfare, and—perhaps most importantly—parents know definitely what circumstances lead to antisocial behavior and what circumstances and measures are most likely to prevent and correct it. The major emphasis of work discussed in this section is on the origins of delinquent behavior in the home and community, the characteristics of young people who are delinquent, and the methods of treating and preventing further antisocial behavior.

Origins of Aggressive and Antisocial Behavior

Children who are exposed to aggressive behavior by adults, a scientist reports [109], are more likely to behave aggressively themselves. This is so whether the adults are in the flesh or on a screen.

In this study, children have been placed in the company of persons exhibiting certain types of behavior; then the children have been observed to learn to what extent they reproduce this behavior. Sometimes films have been used, projected on a screen in a television console. Aggressive behavior on the screen is found to be significantly more influential than the same behavior by the same adults in real life, though the latter has its effect, too. The research team also reports an experiment showing that a child tends to change the pattern of his moral judgments—under the conditions of the experiment—to accord with that of an adult model. Much of the child's social behavior, the grantee sums up, is acquired through imitation of adult models.

Another investigator [110] interested in the sources of aggression has provided some of the first evidence as to the effect of TV programming on real-life behavior. He reports a significant positive relationship between the violence of favorite programs as rated by the parents of third-graders and the aggressive behavior of third-grade boys as rated by their classmates. In other words, as the amount of violence increases, the aggression rate increases also; in the case of girls, no significant relationships were found. The investigator, while pointing to some unanswered questions, is inclined to believe that TV viewing affects real-life behavior and that the modeling variable is a crucial one.

For information on the relationship between aggressive behavior by a youngster and his antisocial activity later on, a group of social scientists [111] studied men who had been equally aggressive in childhood but only some of whom became antisocial as adults. The subjects were 255 men who had been observed with their families for 5 years during childhood and early adolescence. The study classed them as antisocial if court records showed a conviction for larceny, breaking and entering, assault, or sex crimes. Half of the aggressive adolescents, it turned out, had no record of antisocial behavior. Aggressive behavior during childhood and adolescence, it would seem, is not necessarily a predictor of antisocial behavior in adulthood.

Several studies have been focusing on the families of children and adolescents whose behavior has brought them to the attention of community agencies. In one of these investigations [112], workers at a psychiatric clinic studied 22 families with an antisocial child and, for comparison, a group of families with a neurotic, inhibited child. The children studied ranged in age from 6 to 10 years. The antisocial children had been referred to the clinic for such activity as persistent firesetting, wanton destruction of property, and attacks upon people.

The investigators report their agreement with the findings of other research in this area: Destructive, antisocial behavior is not indicative of a specific form of psychopathology. All the antisocial youngsters, however, had earlier manifested such symptoms as marked hyperactivity, accident proneness, learning difficulties, immaturity, and a propensity for regression.

Between the two groups of parents and children, these clinically relevant differences were noted: Parents of antisocial children appeared to have a paucity of emotionally meaningful experiences with their children; parents of neurotic children, in contrast, expressed their feelings readily. Among the members of the neurotic families there was greater interaction than among those of the other families. And, fathers of antisocial boys seemed to be passive individuals in child rearing and in family affairs in general and appeared to gain a vicarious satisfaction from their sons' misbehavior and rebellion; they interpreted their sons' behavior as proof of desirable masculine self-assertion.

Pointing up the value of early detection and treatment is another finding: that the great majority of the children in both groups showed some ability to change. The grade-school child, the investigators remind us, is more susceptible to influence than the adult.

Another team of clinical researchers [38] has been studying individuals described by some psychiatrists as sociopaths and by others as persons with a character disorder. Such people seem not to be troubled by their antisocial behavior; their consciences operate ineffectually.

The investigators selected sociopaths from families at the upper socioeconomic levels in order that these families might be compared with the families, already studied by the same team, in which a child had developed schizophrenia. By and large, the sociopathic boys had come to the attention of some public agency for auto theft, stealing from stores, or assault; the girls, for sexual delinquency.

In general, the parents cooperated so grudgingly that the researchers did not get to know the families with anything like the thoroughness desired. From a preliminary study of the material now available, however, the research group reports that superficially, at least, the parents of a sociopathic child seemed to be marked by these characteristics:

- An unawareness of what the child has been up to. As an extreme example, one boy sneaked a girl into the house and kept her in his room a week.
- A willingness to accept sociopathic behavior until the situation reaches the point where the police, or some other agent of society, steps in. For example, one mother knew that her boy kept stolen money in the house, but she did nothing because, as she explained, she was afraid of getting him into trouble.
- A concern with appearances rather than more basic values.
- Often a disregard of social and ethical values.

One underlying fault in the families of sociopaths, the investigators suspect, may turn out to be that the parents have abdicated authority to the children.

There is already considerable evidence that crime and delinquency in our society are associated with the failure to give a boy adequate opportunity to identify with his father (though this failure cannot be the whole answer because it does not inevitably lead to a bad outcome). Now a cross-cultural study [113] finds that the same is true in many other societies. The sample comprises 48 nonliterate societies selected on the basis of geographical diversity, and on the adequacy of information concerning aboriginal child training practices and criminal behavior. A high frequency both of theft and of personal crime, the investigator finds, tends to occur in those societies where the young boy is limited in forming an identification with his father.

Several other cross-cultural investigations concern delinquent behavior by adolescents in modern societies. A project undertaken by an American investigator [114], in collaboration with Japanese social scientists, promises to turn up considerable new information about the origins of social deviancy. Japan differs from the United States in its non-Western background but is similar in its rising rate of delinquency, residential mobility, and unavailability of jobs for adolescents. The investigators recognize that delinquency and socially deviant behavior spring from many interacting factors and cannot be attributed primarily to either sociological or psychological causes alone. They are also coming to the conclusion that while cultural and psychological differences between Japanese and Americans exist, such as the manner and degree of preoccupation with violence, there are also social and psychological similarities, or "universals." In the processes contributing to delinquency, it is the universals—including factors in family experience—that seem of the greater significance. Delinquency in Japan, however, the investigators report, appears to be less related to class or ethnic groups or neighborhood environments than in the United States.

Another cross-cultural study [115] deals with residents of New York City's Chinatown. These have been subject to poverty, poor housing, and discrimination, which are among the conditions presumed to increase delinquency, yet they have had relatively low delinquency rates. An investigator is trying to identify the child-rearing practices and the adolescent values that may explain this situation. His research should contribute more specific information about the ways in which certain social and cultural conditions induce delinquency while others prevent it.

The most important determinant of the delinquency of male adolescents in industrial societies, a grantee [116] hypothesizes, is boys' expectations of their future as adults. The less hopeful a boy's future seems to him, according to this hypothesis, the more likely that he will be attracted to delinquent groups emphasizing immediate gratifications, such as theft of valuables and free expression of aggression. On the other hand, the more hopeful a boy's future seems to him, the more likely that he will postpone gratifications and work for long-term goals. It is a hopeless attitude toward the future that may turn a boy from a low socioeconomic background toward delinquency, the investigator believes, not the background itself. And a boy's perception of the future as hopeful or hopeless will be determined in part by educational achievement. Hence the nature of the educational system is important. Work on testing these and other hypotheses in Sweden, Japan, and several other industrial societies has begun.

Predictors of Maladaptive Behavior

Measures to prevent or correct maladaptive behavior can be taken much more effectively, of course, if the individuals predisposed toward such behavior can be identified early. The characteristics that make such identification possible are being sought in a long-term study [117] of several thousand adolescents. Basic material includes school records, which supply information on such factors as personality traits, achievement test scores, and home background. The investigators hope to establish a relationship between certain of these factors and various forms of maladjustment that appear later, including juvenile delinquency, motor vehicle violations and accidents, and emotional disorders.

Another researcher [118] is studying a large number of Negro boys and trying to determine the relationship between, on the one hand, performance in elementary school, juvenile police records, occupation of guardian, and presence of the father and, on the other hand, later education, adult occupation, criminality, and marital stability.

This investigator suspects that such problems among adult Negroes as crime, indigence, and family instability are largely determined by the childhood problems of those adults rather than by the effects of poverty and race. If this is true, he points out, equalizing job and school opportunities will no more solve such problems entirely for Negroes than it has for their white counterparts. Antisocial behavior, he hypothesizes, is less closely related to low socioeconomic status than to having a father who deserts his child.

"Normal" Adolescent Boys

Society would be better able to handle adolescents who are delinquent or in other ways abnormal, psychiatrists point out, if it knew just what—in an adolescent—constituted normality. To answer that question, an Institute grantee [119] undertook a study of 84 normal teenagers—boys from middle class families in the Chicago metropolitan area, selected from two public high schools during their freshman year.

Among the preliminary findings:

- Many of these normal boys have performed minor delinquent acts—generally at the age of 12 or 13—and have associated with delinquents. Twenty-five percent of them, in fact, have been involved with the police over such incidents as stealing from a drug store, fighting, throwing bottles on highways, or overturning garbage cans. After a boy has been in trouble once or twice, though, he seems to have learned his lesson. He does not make delinquency a pattern. Nevertheless, he sympathizes with juvenile delinquents and ascribes their troubles entirely to their parents and to society.
- The normal adolescent, like the disturbed one, has feelings of shame, guilt, depression, or anxiety. But he is less afraid to look at himself and to admit his feelings. Psychiatrists would be happy, the investigator remarks, if patients even at the end of therapy were as aware of their problems as these normal boys are of theirs.
- Many of these atomic-age boys are worried about the same things that boys have worried about for generations—including sex, religion, and money. Only a few are worried about the state of the world. A teenager's three most difficult problems, these boys say, are to do as well educationally and vocationally as his family expects, to control his impulses, and to get along with other people.
- The boys have a conservative sexual code and, through the sophomore year at least, they behave conservatively. Typically the boys are concerned with how to behave when out with a girl. Most are interested in sports—as a means of displaying masculinity and of sublimating, the investigator believes, both aggressive and sexual impulses.
- These normal teenagers are not inclined to rebel against either their parents or their parents' generation. They see clearly what values their parents hold, and they tend to hold the same ones themselves. When adolescents and parents disagree, it is on such matters as the use of the car and the time to come home at night. The boys find their fathers reliable, their mothers understanding. They feel closer to their mothers and can more easily discuss emotional problems with them.
- Members of the group express definite ideas about what they are going to do when they have finished school, but they tend to change these ideas as time goes by.

Studies of Delinquent Gangs and Individuals

What forces impel youngsters to join delinquent gangs and engage in antisocial activities? Why do some youngsters become delinquent while others from the same neighborhoods do not? Just what sort of person is a delinquent?

The answers, which are essential to the effective planning of programs to prevent delinquency and to rehabilitate delinquents, are emerging from a number of Institute-sponsored studies centered on the delinquent himself.

Members of juvenile delinquent gangs, according to a theory developed during an extensive, recently completed study [120] of 16 such gangs in Chicago and of several hundred nongang boys from the same neighborhoods, suffer from a condition described as "social disability." Much more so than other boys, they grow to school age without the skills needed to meet new situations. Thus they are handicapped both in getting along with teachers and classmates and in learning, and their school experiences in turn make them additionally handicapped for conventional activities later on, including work. In an effort to meet the universal need for relationships with other people, they drift into gang membership.

According to a complementary theory advanced in the same study, participation in a gang's delinquent activities may be likened to playing a game in which most moves bring a slight reward but in which also, at long, irregular intervals, a severe penalty may be exacted. If action is coming up in the gang and a member fails to get into it, he immediately loses what he values most—status. If he does get into it, he is almost sure to win a little prize in the way of higher status and a stronger sense of belonging, and his chances of being seriously penalized through injury or arrest are not, for any one instance, very great.

Following are some of the other major findings of this investigation:

- Gang members, all of them lower class boys (no middle class gang could be found), express as high a regard for middle class standards as do middle class boys. This finding surprised the investigators because it ran contrary to a widely accepted theory that juvenile gang delinquency is a reaction against middle class standards.
- Members of delinquent gangs do not pursue the middle class goals they espouse because, in part, they don't know how, and secondly, gang life, which they value, emphasizes behavior incompatible with such pursuit. No gang boy expects the gang-membership phase of his career to last forever; the trouble is that involvement in gang life hampers the achievement of values held by the boys with respect to future phases.
- None of the gangs studied can be characterized as strictly criminal or as being part of a criminal subculture. However, illegal activities were characteristic to some extent of all the gangs.
- Gang life offers few if any constructive tasks for several reasons: The leaders must choose activities at which most of the members are proficient; boys who have found fellowship and other rewards in delinquent activities may find the level of reward in conventional activities too low; and finally, the leaders know that the easiest way to meet a threat to their status is to engage in delinquent activity.
- The fewer the opportunities to which a group is exposed in its own area—for example, recreational centers, counseling agencies, churches, schools, chances to work—the more the group is in trouble with the law.
- The roots of social disability—which is defined as an impairment of the individual capacity to participate constructively in interpersonal relations—appear to lie in early family life. As an example of the consequences, gang boys are relatively ignorant of how to dress for a given occasion, or to eat in public, or to carry on a polite conversation. Their limited social skills are attributed to their narrow social experience not only within the gang but also, and first, within the family. Their social disabilities contribute to their worries about status and in this way lead to involvement in delinquency.
- One factor in the formation of Chicago's juvenile gangs is the tense, fearful atmosphere of lower class, particularly Negro, areas. The tensions create an atmosphere in which representatives of public agencies, which are potential sources of support, and even neighbors are defined as part of a hostile out-group. The opportunity to stand on the corner with other boys is all the more valued because such an association requires very little in the way of the kind of formal commitment seen as necessary in interacting with community sponsored groups.

The white community is more concerned than the Negro with the excesses of its young people, and in general controls its young people more effectively. Among the many and complex reasons are the greater economic stability of white communities and the existence of indigenous institutions of established leadership.

The study reports that the detached worker program under which college graduates employed by the YMCA of metropolitan Chicago hang around with gang members and try to help them with their problems, has been successfully used to prevent gang fights and is now being experimented with as a gateway to what sociologists call "the opportunity structure." If a boy can become interested in employment, perhaps he can also become interested in going back to school or in getting more education and training some other way. And if the road can be cleared to steady employment for one boy, perhaps he can become a channel through which to reach other boys.

Possibly the most powerful influence against delinquency, reports one of the investigators, is the opportunity for a youngster to step into a job as soon as he leaves school.

Another extensive project [121] has been concerned not only with illuminating the nature of delinquent gangs and their members and of the culture giving rise to them, but also and primarily with measures intended to control gang delinquency. The gangs in this case were in a lower class predominantly white district of Boston.

Three control techniques were applied: intensive work with gangs by professionally trained social workers, each giving primary attention to a single group; a special program of psychiatrically oriented casework with a group of disturbed or unstable families, which tend to produce delinquent offspring; and mobilization of community resources, through the use of existing groups and the creation of new ones, to deal with problems of delinquency. The direct work with gangs was the project's major effort. The workers—like those in the Chicago study—eventually were accepted by the gang members, served as counsellors and advisers, and, among other services, gained access for gang members to a wide variety of legitimate institutions and organizations such as business firms, athletic leagues, guidance services, and health facilities.

The delinquency control program was conducted for three years; then its effect on reducing law violations and morally disapproved behavior was measured. All major measures, including illegal actions, disapproved actions, and court appearances, the investigator reports, support the conclusion that the project in these respects had only "negligible impact."

The program did have considerable impact in other areas, the investigator reports. For one thing, it left the community with a number of organizations and programs for doing something about delinquency in the future. For another, it seems to have caused desirable changes in some forms of nondelinquent behavior—for example, recreational activity. Further, some gangs were more vulnerable to change than others, and an analysis of these variations and the reasons for them is expected to provide specific help for workers in delinquency control programs.

Age and social status appear to have been highly important in determining the frequency of criminal behavior by the Boston gangs. For example, a curve presenting the number of individuals appearing in court per year shows a gradual rise from ages 7 to 16 or 17, maintains a high level to age 20, and drops rapidly between 20 and 23. This was true both for a sample of the gangs that were included in the project and for similar gangs that were not. The commission of criminal acts, the investigator suggests, is a required concomitant—in the lower class neighborhood studied—of passing through the successive stages of adolescence, and a prerequisite to the assumption of adult status.

A systematic relationship between social status—within the lower class—and delinquency is also indicated. Crime was both more prevalent and more serious among gangs at the lowest social level. As the lower status levels were approached, the incidence of delinquency increased exponentially rather than linearly. Further, the gangs at the lower social levels showed the least reduction in delinquent acts, suggesting that at these levels antisocial behavior is more central to the culture.

A study [122] in south central Los Angeles is concerned in part with the nature of the delinquent girl gang and its members. The area, a residential region covering many square miles, is 75 per cent Negro, and the half-dozen girl gangs under scrutiny are comprised of Negro teenagers.

The gangs vary considerably in size, cohesiveness, and activity. One of the larger groups never met as an organized unit. Another gang concentrated upon making life miserable for schoolmates, fighting girls who were not gang members. The most extreme group indulged in violence, hitchhiking and mugging drivers, robbery and vandalism. This gang dispersed when many of its members became pregnant; it has been succeeded by another gang of 20 younger girls who may carry on the tradition.

The researchers find that gangs of girls are not as long-lived as boys' gangs. With one exception, they all began in relation to a boy's gang. They are characterized by greater turnover in membership, and they tend to disband if their brother gang disperses.

Boy-gang members, questioned after incidents of assault, theft, or other antisocial activity, reported that girls rarely participated in either the planning or the action. Almost half the boys said that if girls had been present, the planned action—particularly if a theft—would have been dropped or postponed. The evidence to date, then, suggests that a girl gang's role may be less incitatory than sometimes supposed.

The girls' backgrounds and psychological characteristics are being analyzed. One result of the findings may be additional light on what can be done to reduce the production of illegitimate children, which is very high among members of certain types of gangs and presents the community with a social cost considerably higher, probably, than that of gang-committed robberies and assaults.

Also under way in Los Angeles is an investigation [123], marked by first-hand observation, of the behavior of adolescents in a number of communities within the city. On the basis of pilot studies, the researchers report the existence of an adolescent subculture whose members—described by the study as "insiders"—cut across class lines and are found in every neighborhood. From 80 to 90 percent of the delinquent youth in a community, the investigators believe, are "insiders," subscribing to a way of life and values that are poorly understood by their elders. The study aims to substantiate these preliminary findings and to identify stages through which a delinquent subculture develops. Once the adolescent social system is well understood, the research team believes, it will be possible to control those features that facilitate delinquent behavior.

Interestingly, in view of some apparently contrary findings from big cities, a study [124] dealing with socioeconomic status and delinquency in rural New England finds no consistent and important relationship between social class and misconduct—that is, privately admitted misconduct. The lower class adolescents, the grantee reports, do not embrace to any greater degree than those of higher status the values of negativism, cynicism, or short-run hedonism. Nevertheless, in one small community studied—as in most American communities, says the investigator—arrests for nontraffic offenses were found to be concentrated in the lower classes. Just as many upper status as lower status adolescents confessed privately to relatively serious delinquent acts, he reports, but the police arrested five times as many members of lower classes. In the two top classes, not a single arrest was made. Why? Perhaps, it is suggested, the police have been trained to expect more lower class violators and seek them out. Further, the upper status rulebreakers may drive greater distances and put themselves beyond the notice of local authorities. Also, they may cover up better and show more deference to authority. In any event, says the grantee, theories that attribute delinquency to lower class deprivation or to lower class culture do not appear to be valid for rural and small city communities of the type studied.

For a better understanding of the personality forces associated with adolescent misbehavior, an investigator [125] and his associates have developed a self-report questionnaire that discriminates between delinquents and nondelinquents. The investigators believe that it and other instruments they have developed and tested—checklists for analyzing the case histories of delinquents and for rating the behavior of delinquents in institutions—can be useful in determining the cause, prognosis, and most effective treatment of delinquency.

The questionnaire comprises three sets of items, each measuring an independent personality factor or dimension. One factor, labeled "psychopathic delinquency," apparently reflects tough, amoral, rebellious qualities coupled with impulsivity, a conspicuous distrust of authority, and a freedom from family ties. Among the true-false items used to measure this factor are: "In this world you're a fool if you trust other people;" "You gotta fight to get what's coming to you;" "The worst thing a person can do is get caught."

Another personality dimension associated with delinquency is described as "neurotic delinquency." Like the first one, this, too, reflects impulsive and aggressive tendencies, the researchers report, but here they are accompanied by tension, guilt, remorse, and depression.

The third factor is labeled "delinquent background" or "subcultural delinquency." It seems to mirror attitudes occurring among delinquents in whom personality maladjustment is not clearly evident. Sample items: "Most boys stay in school because the law says they have to;" "Sometimes I have stolen things that I didn't really want;" "My folks usually blame bad company for the trouble I get into."

The questionnaire and the other instruments are now being used to study boys in a Federal training school. The immediate goal is to see whether or not there is a relationship between a boy's score on a given personality dimension and how well he progresses in the institution and on parole. If the answer is "yes," as the investigators expect, it should be possible to design rehabilitative programs that take into account the different kinds of delinquent personalities that must be treated.

Combating Juvenile Delinquency

For the long run, the best way of dealing with the problem of delinquency probably is to correct the conditions giving rise to it. That is the reason for the emphasis on studies, summarized in the preceding sections, directed toward identifying the causes as specifically as possible. Meanwhile, what can we do to make our treatment of delinquents more effective? How can we reduce the number of those who become repeaters?

The courts are becoming increasingly aware that mental illness is an important factor in juvenile delinquency and that detention homes to which delinquent children are committed should provide mental health services that would shift the emphasis from punishment to therapy and rehabilitation. The Institute supports several projects that strive to enlist all community resources for the establishment and operation of detention homes as therapeutic communities.

One project [126], for example, has made possible a pilot program of comprehensive care for youthful offenders—emotionally disturbed children who have been committed by the courts for rehabilitation treatment. The program setting is a resident children's home that has been established as a diagnostic reception center. Treatment includes correctional casework counseling, mental health diagnostic study and treatment, clinical consultations with psychiatric teams of State mental hospitals, and psychiatric evaluation of prospective foster homes.

A variety of additional therapeutic programs for dealing with delinquency are described in the next chapter.

Intensive Care and Treatment: Avenue for Rehabilitation

INTRODUCTION

The goals of prevention, early diagnosis and early treatment continue to guide the work of those in the child mental health field. But these goals are sometimes unattainable. Social and environmental conditions cannot be transformed overnight, the sick child is not always recognized early, treatment comes too late, or it is simply not effective. For such children—those whose problems become exacerbated, whose psychological suffering and social malfunctioning becomes intense—the concerted and intensive care offered in a residential setting is often the only answer. The aim here is to abort chronicity, to reverse the tide of psychopathology, to rehabilitate the child, and return him to normal life as soon as possible.

Efforts to meet the needs of children requiring residential care are being made by NIMH in a wide range of institutional settings: orphanages, foster homes, institutions for the mentally retarded, hospitals for the emotionally disturbed, and correctional institutions. All of these can be viewed as comprising a third line of defense in the struggle to overcome the forces, which research is identifying ever more closely, that make for mental illness, intellectual retardation, and antisocial behavior, and that prevent so many of us from realizing our capacities as human beings.

But these institutions, where we place children for a little or a long while because of some deviancy or misfortune—in their parents' lives if not their own—can compound the problem instead of easing it. The child raised in an orphanage may become crippled emotionally; the adolescent in a State mental hospital may drift into chronic mental illness; the youngster in a correctional institution may emerge more bitter against society than when he entered.

Consequently the National Institute of Mental Health supports a variety of research and demonstration projects to learn and show how institutional services can be improved—can be given a better chance of strengthening the emotional well-being of the children they serve. Many of the projects touched upon in earlier chapters serve these purposes to some extent; examples of work that is more directly concerned with them are presented here.

NORMAL CHILDREN IN INSTITUTIONS

A number of NIMH investigators have been concerned with the effect upon children of residing in institutions—orphanages, hospitals, and other residential settings—for prolonged periods, particularly in early infancy. Many of the studies have been stimulated by findings as to the deleterious effect of isolation or inadequate mothering on normal development in animals.

In research overseas, an Institute grantee [127] has found dramatic differences in developmental rates between babies raised in one type of institution and those raised in another. In the first type, the infants spent most of the time lying in individual cribs and received very little attention. In the second type, in contrast, they were frequently propped into a sitting position and were held while being fed. Ninety percent of the children between the ages of 1 and 2 in this second type of institution could sit alone, and 15 percent could walk. Only 42 percent of the children from the other type could sit alone and none could walk.

The same investigator has shown that 15 days of training can produce significant advances in motor skills in infants from 7 to 12 months old who have gross developmental deficiencies. He now wants to learn if these advances, as measured against those of a control group, will continue and lead to different rates of development at later ages. This research should help demonstrate the benefits of even a small amount of stimulation for deprived infants.

Another investigator [20] is using several developmental measures to compare a group of babies living with their parents and a group of babies living in a foundling home. In preliminary work decided differences were found. One lay in the babies' response to pacification attempts when they were in distress. The institutional babies, as a group, were easier to pacify than the others and at 1 month of age could be pacified equally well by any of three techniques—feeding them, giving them a nipple pacifier, or holding them in a sitting position in their cribs. The family babies, on the other hand, could be soothed much more easily by either of the first two methods than the third. As the babies were pacified, their heart rate dropped, but it dropped considerably lower among the institutional babies.

These findings indicate, the investigator suggests, that family babies may organize their response pattern earlier—that is, earlier come to show a preference among pacification attempts. In addition, the findings may indicate that the babies raised in the nursery are more sensitive than the others to pacification efforts, and have less effective feedback mechanisms for controlling the heart rate. The increased sensitivity could be explained by the conditions of sensory restriction under which the infants are being raised. In this study the attention given a nursery baby—for feeding, bathing, and all other purposes—was always less than 2 hours, and sometimes as little as an hour and a quarter, in a 24-hour day. The aides rarely sang or spoke to the infants, and the feedings—for which nipples with large holes were used—were often very rapid.

Another difference between the two groups was in weight. Even though the institutional babies were on a more than adequate diet and were getting excellent pediatric care, by the end of the first 2 months they had gained only half as much as the other babies. The investigator believes that this difference, too, is attributable to the restricted sensory environment of the nursery infants. These findings suggest, he believes, that the nature and the extent of the opportunities for communication between the infant and its surroundings can affect physiological function and behavioral activity in infancy.

This earlier work is being repeated and extended. Babies in the institutional group now under study will be followed through the years. All of them will have been adopted at the age of 2 months. Studies in child guidance clinics and mental hospitals indicate that adopted children have a higher incidence of a variety of psychiatric problems, but these studies have generally not taken into account either the age of adoption or the time that the child may have spent in an institution before adoption. The investigator hopes to compare the later emotional well-being of his babies adopted at 2 months with that of a group of normal children and also with that of children from the foundling home who were adopted only a few days after birth. In the case of the 2-month group, he hopes to throw light on a largely unexplored area, the nature of the parent-child relationship in adoptive families.

RESIDENTIAL CARE FOR DISTURBED CHILDREN

Residential centers for those children who are too severely disturbed to live at home and be treated at outpatient clinics have a common goal—to treat and rehabilitate the children living there—but vary in their techniques and in their quality. In an effort to make residential treatment uniformly as good as it can be, the Institute supports a number of projects to analyze existing treatment techniques and staff skills and to test new procedures.

One investigator [128], for example, is carrying out an intensive study of 12 carefully selected child-care centers. He is gathering information on the centers' history and philosophy and on the roles, attitudes, and decisionmaking responsibilities of the workers and supervisors. The findings should supply much-needed information about desirable training programs for child-care personnel.

Another grantee [129] directs a wide-ranging program that trains teachers of emotionally disturbed children, uses a new pattern of psychological and educational services for such children, and experiments with short term residential care as a means of supplementing a community's usual resources for helping children.

Other projects concerned with examining and improving residential programs include, for example:

- A study [130] of the methods and results of a unique program under which troubled adolescents live in an institutional community that simulates a miniature adult community by having its own town meeting, economic and judicial systems, work situations, and the like.
- A program [131] that places severely disturbed children in a small residence home for some months and then with selected and super-

vised foster parents. When necessary, in times of crisis, the children are returned to the residence home. The children receive psychotherapy. Case work continues with their natural parents.

- A pilot project [132] under which a psychiatric nurse begins working with a hospitalized child and continues working with him and his family upon his return home.
- A comprehensive project [133] having two aims: to show that foster care as a mental health resource can be more widely and effectively used, and to develop improved methods of selecting and using foster homes. In this study, disturbed boys—from 8 to 13 years old and of lower class origin—who have failed in two previous foster home placements are placed with foster parents carefully selected for marital stability, warmth in interpersonal relationships, and lack of gratification needs. Both the foster parents and the children are given intensive casework and group therapy. In addition, the child receives remedial tutoring and goes to summer camp. Consultation is offered as the need arises.

HOSPITALIZATION FOR DISTURBED CHILDREN AND ADOLESCENTS

Since the inception of the Institute's Hospital Improvement Grant Program (HIP) 2 years ago, 19 State hospitals have chosen to develop new programs for children and adolescents as their first priority. Hence the grant program has already begun to bring about profound changes in the residential treatment of mentally ill and emotionally disturbed youngsters. It has encouraged wide-scale innovation and experimentation in operational patterns of hospital care, has attracted new, young professional personnel, and has stimulated programs of evaluation and measurement of the effectiveness and efficiency of these new patterns.

In one State hospital [134], the new program for adolescents has forged together group psychotherapy, ward-patient government, patient discussions, a special therapeutic education school program, individual therapy, occupational therapy and recreational therapy. By the end of the first year, the program had attracted so much attention that a special bill was introduced into the legislature for an appropriation to build an adequate facility for adolescents on the hospital grounds.

In addition to stimulating new combinations of treatment techniques, HIP has opened many new corridors between the State mental hospital and the community. In one new unit for adolescents, the year-end progress report [134] notes that increased coordination with community agencies has occurred and several conferences have been held with County Welfare Boards, Juvenile Commissioners, religious welfare societies, and children's homes. This is an important achievement, since one of the major problems has been the isolation of the hospital from the community, with the result that children have become alienated from the community and lost to the channels leading back into it.

Another hospital [135] notes in its first year progress report that community facilities are heavily utilized in its new program for adolescents. Swimming is regularly scheduled at the nearest Boys' club. Field trips have included the circus, the local museums, the local space research installation and the local F.B.I. office.

Still another hospital [136] reports that its new project, among other goals, attempts to provide full school credit for work completed while the patient-student is hospitalized. The public school systems within the area have cooperated excellently, the hospital notes, and have been perfectly willing to grant credit for work within the project and to accept the student in the regular school system upon his release from the hospital. The hospital is now working for full State accreditation of the project's educational program.

The Hospital Improvement Program has also contributed to speeding the use of a new educational and psychotherapeutic treatment pattern as the method of choice in childhood and adolescent disturbances. Under this pattern the formative procedures of education are applied to the growth potential of the developing human organism at the same time that the reformative and restorative procedures of psychotherapy are applied to the pathological processes. In the United States this fusion has been called educational therapy or psycho-education. In Europe it is known as orthopedagogy.

One hospital [136] has inaugurated an "accredited therapeutic education" program that fuses therapy and education in a regime of physical education, recreation therapy, bibliotherapy, art therapy, and shop and occupational therapy with a staff at a one-to-one ratio with the children.

The hospital reports "a very noticeable change in patient attitude, particularly on the part of the teenager, toward education." When first approached, the typical teenage patient wanted no school work. The hospital thinks this was because his difficulties had created problems in school for him, with the result that he had never had a successful experience relating to education. "We now find the students, without exception, very eager to go to school," the hospital reports, "and becoming rather perturbed when something happens which might either make them late or cause them to lose a day in school. Reports from ward personnel indicate that these individuals, since involvement in the school program, seem much better adjusted with a far better motivation and enthusiasm toward tackling problems, and much better able to conform to the give and take of ward living."

Another trend is an increased emphasis upon strengthening the intact part of the personality and upon the development of social mastery and social competence.

One hospital [137] has established a program that seeks to provide vocational training and to enhance social functioning. Special facilities include a general shop area, welding, print shop, and sewing, typing, and cooking areas. A chief vocational instructor, a social worker, a psychologist, a business education instructor, and a shop instructor have been brought together in a unified staff.

Another innovation is the development of a project under which selected children live in a foster or boarding home and return to the hospital for a day-treatment program [138].

Another program [139] for hospitalized adolescents uses regular wards of the hospital for sleeping but houses day activities in a separate unit—a converted barn. The program includes education, recreation, individual and group therapy, and industrial and vocational training.

In yet another State hospital [140], the director of research has demonstrated methods of providing secondary education for small, carefully screened groups of adolescents. The material came from the public schools and from selected correspondence courses. Films and texts on such life-adjustment matters as personal grooming, manners, and making friends were included, as were newspapers, magazines, and books likely to interest adolescents. Vacations were scheduled to coincide with those in the nearby public schools, thus making it possible for many students to spend these vacations with their families. Marked overall academic and psychological improvement were found. Professional people from other States and Europe have visited the hospital to study the program.

INSTITUTIONS FOR THE MENTALLY RETARDED

Major interests of State hospitals for the mentally retarded include programs to help the severely retarded child care for himself, and programs to build social competence in the less severely retarded and enable him perhaps to return to the community. The Institute's Hospital Improvement Grant Program has provided new impetus and new funds for experimentation with both types of program.

New techniques for working with the severely retarded have made it possible to teach socialization and self-care skills to children who formerly would not have been trainable. One hospital [141] reports at the end of the first year: "Approximately 60 of the children have shown considerable response to toilet training . . . All children are now clothed at all times. Four of the children have been transferred to trainable wards and more are awaiting space on a trainable ward. Self-feeding training is underway."

Another hospital [142] reports: "In the Physical Therapist Program we have developed walking with support of parallel bars for several profoundly retarded cerebral palsy cases. We have seven profoundly brain-damaged youngsters that are taking some steps without support who have never walked before. The age range of those making this improvement is approximately from 10 to 18 years. The staff is quite elated over this, and the parents even more."

This hospital further reports: "Curriculum developers have used homemade devices and have purchased materials to teach shape discrimination, color discrimination, and simple concept formation. They have worked on all of the basic self-help skills. There are some children that can use a wash cloth that have never been able to before. Some can feed themselves that have never been able to before. Some can brush their teeth that have never been able to before."

Another hospital [143] that has undertaken an intensive self-care and socialization training program reports outstanding progress in most areas of training. Other wards have asked the project personnel to help them introduce similar programs.

One hospital [144] with a project concerned with the less severely retarded reports that its Community Transition Adjustment Program for Mentally Retarded is divided into three major areas of training and demonstration—one in the development of sheltered employment, another in the development of leisure-time activities, and a third concerning the daily living needs of the institutionalized retarded patient.

A contract workshop makes it possible to experiment with various levels of work and activities to discover what patients at different adaptive levels are capable of doing. It also provides training for vocational counselors and other professionals.

Plans relating to the ability of the child to transfer back to the community are being developed in terms of the proper use of leisure and off-the-job time. The activities center around various ways by which the retarded individual can utilize his leisure time; they also involve training in social customs.

A cottage life program involving training in independent functioning and personal responsibility is also being developed.

Another hospital [145] with a new unit and program for preparing more capable residents for return to the community reports that all the boys and girls transferred to the unit have shown, since then, a great deal of maturity and initiative. These persons receive special vocational training and will be helped to get and hold jobs in the community.

Another experimental effort concerns new ways of working with families. An institution [146] that is developing a home care counseling demonstration project reports: "A weekly conference, where the entire project staff discuss each child and family, has been educational and helpful in giving a total picture of the progress of each family . . . We are improving our efforts in counseling parents to achieve a change in their management of the child, commensurate with the child's progress. There has been an educational 'spill-over' benefitting the entire institution: hyperactive retardates are receiving benefits; young, profoundly retarded children are receiving training in self-help skills; older, more capable residents have gained recognition as persons possible of progressing."

RESIDENTIAL PROGRAMS FOR DELINQUENTS

Experience with resident treatment programs for juvenile delinquents has indicated that they are expensive and—which is worse—often ineffective. The Institute supports a number of studies that will, it is hoped, increase the effectiveness of these programs. It also supports important work directed toward finding substitutes for resident treatment.

The Importance of Setting and Staff

Institute grantees have studied ways of improving the treatment of delinquents while they are institutionalized. An investigator [147] who studied 70 boys housed in one of the cottages of a large institution reports that when they left, they were generally more hardened and exploitative than when they had entered. The study points toward the desirability of the types of facilities and programs being tried in several correctional systems in this country: smaller, simpler institutions; small cottage groupings of 20–25 boys; and sufficient personnel to carry out intensive treatment and activity programs.

A highly significant development during the past decade in institutions devoted to the treatment of personality and behavioral disorders has been increasing emphasis upon what is generally referred to as "milieu therapy"—a concern with the possibilities of treating the emotionally disturbed through planned management of the structure and processes of the situations in which they live.

An Institute grantee [148] and his associates are now trying to conceptualize institutional life according to a systematic theory and to develop operational procedures for methodically testing theoretically defined variables. The research is done in connection with a residential treatment program for emotionally disturbed delinquent adolescents. The present work of these investigators rests on an earlier study in which they demonstrated that, even in a well-run institution, the patients can create, maintain, and transmit a separate deviant subculture supporting values and a social system counter to those of the institution itself and thus largely negate intensive and skillful individual therapeutic efforts.

As part of their overall objective, these investigators have developed methods of systematically observing activity and interpersonal interactions within the cottage structure of the institution. In some contrast to the psychoanalytically derived orientation of the institution, the study's concern is with the impact of staff management of the cottage unit on peer group organization within the unit and on the individual as part of a social system.

The primary setting of the study is three cottages; the first headed by an educator stressing stable, orderly routines; the second, by an "old-line" non-professional who also is concerned with orderly routines but who has developed a more easy-going relationship with the boys based upon the implicit agreement that the cottage have "no trouble;" the third, by a professional social group worker affording more autonomy to the boys in his unit.

In the third unit, greater success has been achieved in replacing deviant organization supports for the antisocial values of its members. The deviant values of this cottage group tend to be supplanted by positive values more than those in the other two groups. By developing a conceptual strategy to enlarge understanding of informal peer subcultures and their correlation with different styles of staff management, it is hoped that more effective residential treatment centers can be developed. A model cottage is planned.

Potential Use of Drugs in Treating Delinquents

Though psychiatric drugs are not generally used in treating juvenile delinquents, the results of an experiment conducted by a team of clinical investigators [42] suggest that certain of them may have value for such use. In this work, some of the delinquents living in certain cottages of a training school were given Dexedrine (dextroamphetamine), a drug shown to be effective with hyperkinetic or overactive children, as noted in an earlier section. With adults this compound acts as a stimulating agent; instead of stimulating children, however, it apparently calms them. The institutionalized boys to whom it was given ranged in age from 11 to 17.

The boys treated with Dexedrine were observed to show a marked improvement in behavior as compared with the boys who were left untreated or who received a placebo. Indeed, there was general improvement in behavior among all the boys in each cottage, and this, the investigators believe, probably resulted from a more harmonious general atmosphere induced by the behavioral improvement in the drug-treated boys.

The research team points out that if a delinquent youngster can establish better relations with training school personnel—as he presumably can if his behavior changes for the better—his period of commitment may result in a more constructive outcome. Further study of the effects of psychiatric drugs—as well as of other factors—in the training school environment is seen by the researchers as "a compelling social necessity."

A Group Program in a Psychiatric Hospital

One Institute-supported project sought to cope with acting-out youngsters, many already delinquent, who as inpatients in a group-oriented treatment program in a children's psychiatric hospital demonstrated a tendency to group themselves on the basis of symptom patterns. Frequently this group evolved into a "delinquent gang" and required almost constant staff activity.

A program of ego-building activities, thrill-fulfilling adventures, and special schooling was developed to meet the needs of these children. Professionally trained group workers were added to the staff and their role in the hospital setting examined. The investigators reported that the successful integration of social group work into the child-care department of a treatment institution was a challenging task. There was need to accept and acknowledge the resistance to change in both the children and the non-professional child-care staff. It was necessary for group workers to formulate objectives of practice that would enable them both to become accepted by fellow child-care workers and to be effective in their practice as professionals.

When delinquent social structures existed, workers intervened in the group process in order to help establish a climate in which the personality growth of individuals could take place.

At the end of 3 years, almost all of the members of the study group were either discharged to their families or placed in another institutional but nonpsychiatric setting. Since all the children in the group were simultaneously in individual psychotherapy, the investigators felt that group management and individual therapy had both contributed to positive behavior changes.

The results of the group program at this hospital were influential in the decision of other institutions to add professional group workers to their staffs.

The Delinquent Girl: A Suggested Therapeutic Program

Despite considerable concern over the adolescent girl in trouble, there is still little information about the causes of her problems and how she can be helped more successfully to cope with life.

In the first phase of an Institute-supported study [149], 100 girls institutionalized as delinquent and 14 girls in a home for unmarried mothers were interviewed by the investigator and participated in group sessions with her. A suggested treatment program has resulted.

Because of beatings, desertions, placements, and replacements, the investigator finds, the identification problem for the delinquent girl—the need to separate from her mother and yet be like her—is often particularly complex. Some girls become "mothers" to their mothers to compensate for the maternal shortcomings.

The unfulfilled need to have been dependent upon their mothers while growing up, the investigator finds, appears to be of crucial importance in the sexual misbehavior of girl delinquents. These girls have an almost complete absence of friendships other than romantic love relationships. They are exceedingly lonely and express a great longing for friends. Like the non-delinquent, the delinquent girl is emotional, introspective, and romantic about boys. The girls studied tended to assume the total guilt for the failure of their heterosexual relationships.

In the confinement of the institutions, homosexual relationships are likely to form. The investigator reports these reasons: confusion about the role of a woman, particularly where there has not been an adequate family example; lack of self-confidence in the competition to attract boys; and sexual misinformation and mistreatment. A relationship with another girl appears to some to be a higher form of love and one that can meet some of their emotional needs without the risks of unwanted pregnancy.

The investigator reports that the girls studied in State penal institutions are not less intelligent than other adolescents. Further, their goals tend to be middle class in most respects, regardless of the girls' social class origins. But the delinquents are impatient to reach them.

Because of their idealism and intense emotional feelings, these girls tend to be highly introspective and extremely critical of adults who do not live up to their own standards for adults. They often find it difficult to accept adult weaknesses and what they see as the hypocrisy of the adult society. Like other adolescents, they feel they do not have an adult in whom to confide. Also, like other girls of their age, the investigator reports, these delinquent girls share the still uncertain and unresolved status of women in our society. It is the grantee's conclusion that delinquent behavior is closely related to this cultural conflict, although not produced by it.

The girls in the study sample seem to have a special capacity for artistic expression, a finding the investigator believes should be followed up. She points out that art enables feelings to be expressed non-verbally and also provides some identification with a legal but "non-conforming" part of society.

From the work to date, the investigator postulates the following theoretical framework as an explanation of the suggested treatment program. Many youngsters in institutions have had a long series of brutal experiences. They have been exposed repeatedly to emotional trauma, without interim periods of sufficient gratification to allow recuperation and without sufficient positive emotional experiences to counteract the recurring trauma. If this sequence continues long enough, an immunity to stress develops in some individuals. Human involvement is warded off and anxiety appears to have vanished. Such youngsters are especially difficult to reach in treatment.

The proposed therapeutic program is based on the assumption that these troubled young people must experience health before they are able to feel pain. Three steps in treatment are suggested: focusing on and strengthening the healthy aspects of personality, providing individual therapy on a supportive level, and supplying individual therapy and group work treatment that examines the individual's reactions to stress and tries to provide insight. At this point, increasing demands from the educational and living situations can be introduced.

The investigator found that programs for institutionalized girls in her State were particularly weak in vocational and educational guidance, which these youngsters needed and wanted. Action is underway to make some of the reforms suggested by this study.

The project now is assessing the characteristics of adolescent girls who participate in settlement house and community center activities. The values, goals, attitudes, and emotional relationships of these girls will be compared with those of the institutionalized group.

Treating the Families of Delinquent Boys

Treatment of young delinquent boys from the most socially deprived groups presents a serious challenge to mental health practice. The task of rehabilitating the child and his family becomes more formidable when court intervention removes the child from the family and thus reinforces the parents' feeling that there is no link between parental behavior and the child's problems.

An Institute-supported study at a residential treatment center [150] serving such youngsters—from 8 to 14 years old, seriously disturbed, and expressing their conflicts and hostilities in antisocial behavior—has come up with hopeful answers to these problems.

The youngsters treated at this center come from large families, many of them Negro or Puerto Rican, at a low socioeconomic level. The research team postulated that in such families there is a relinquishing of the executive guidance function by the parents. In its place a sibling subsystem with its own values, existing in opposition to the parents, develops. This situation was assumed to be of crucial importance in a child's failure to develop adequate internal controls.

In the research recently completed, the investigators attempted to reverse that pattern. They developed and tested a multiple-therapist technique as a tool for modifying both individual pathology and the pathogenic elements and functions within the family that affect the child. Fifteen families with more than one delinquent child were carried in treatment for two years.

For this type of family therapy, the investigators used a three-therapist team. This enabled them to observe and treat the family as a whole and the siblings as a subgroup in one session of several stages. One major objective was to improve communications between parents and children, two groups that commonly think the other one speaks "another language." Other objectives were to institute or restore executive functioning in the parents and to utilize the dynamics of the sibling subgroup as positive influences on the delinquent. Thus the technique was aimed not only at helping the troubled child and preventing recidivism, but also at exercising preventive intervention with the siblings of the child showing antisocial pathology.

Contrary to expectations, the study found that these "hard core" families were intensely interested in the treatment offered. All but one of the experimental families completed the 30-session treatment, and there were very few broken appointments.

The project has greatly influenced the design and operation of the institution's program. Almost all of the families of the children in residence are now being treated as were those in the study group. Youngsters in the agency's halfway house also have been included in the family therapy program. For those children for whom residential care is necessary, this therapy program measurably reduces the period of time in residence.

Clinical impression is that the removal of children from their homes could be reduced by approximately 30 percent if such family therapy were available at an earlier stage, on an outpatient basis. The agency is now moving to add a family outpatient clinic and a day-treatment center so that fewer children will have to be taken from their families and treated in an institution.

Improving the Probation Process

Another type of effort is directed toward providing information that will enable communities to improve the probation process. For example, work [151] in California points to great variation in the amount and nature of the treatment received by delinquent youngsters who are wards of the court. Some are never seen by their probation officers after the court experience; many are seen on the average of once a month; others are given extended interviews once a week. Further, many though not all youngsters in trouble end up being labeled as delinquent, probationers, or wards of the court, and such labeling is believed by some authorities to affect adversely the way the youngster behaves toward others and the way others behave toward him.

The Institute-supported investigators are now trying to evaluate the various probation practices and also the effect of labeling. The criterion will be whether the youngster receiving a certain kind and amount of supervision or treatment, or none at all, and bearing or not bearing a label, engages in further deviant behavior.

The study covers nine counties of southern California, which offer a wide range of population densities, residents of diverse backgrounds, and wide differences in the policies of the various probation departments. The cases of some 2,600 youngsters will be followed.

When the findings are in, they are expected to justify the experimental manipulation of cases referred to the probation departments. For example, if a particular procedure is found to be most effective with youngsters from a particular background, supervision procedures can be modified accordingly. The study's findings will also be of use, it is expected, in training recruits to the profession of probation.

Another investigator [152] has been making a 3-year followup of juvenile and young adult delinquents who have just been paroled from an institution. The effort here is to record the general sequence of events, after parole, as an aid to understanding the process by which offenders return to or depart from their previous delinquent activities. The investigator hypothesizes that rehabilitation will accompany shifts in companions and in group activities.

Evaluating Community-Based Treatment for Delinquents

An important project [153] to determine the effectiveness and potential utility of a community-based treatment program for delinquents—that is, one which does not depend upon institutionalization—is well underway with Institute support. The project began by comparing the effectiveness of an intensive community program—stressing a wide range of group and individual activities including psychotherapy and job and recreation programs—with that of the usual institutional program. The former was demonstrably more successful. The delinquents in the experimental community group had higher parole success rates and more positive test score changes than those in the institutionalized control group.

The second phase of the study is examining those aspects of the experimental program that were most closely related to success and developing a treatment model defining the most effective ways of handling various types of delinquents.

All first-commitment delinquents sent by the juvenile courts covering the experimental communities are considered for the program. Those excluded include juveniles guilty of seriously assaultive offenses, those referred for psychiatric treatment on the basis of psychiatric disorders, and those toward whom intense community feeling exists. With rare exceptions, children assigned to the program are 13 or older. Individuals assigned to the experimental group have carefully matched counterparts in the institutionalized control group.

As of mid-1965 less than a third of the experimental group had experienced parole failure (defined as revocation of parole, court recommitment or unfavorable discharge), as compared with almost a half of the control population. Measures of community adjustment such as employment success and school and family adjustment are being analyzed, as are personality factors related to success in the new program.

Because a delinquent's success in reestablishing himself in the community is related not only to his own attributes but also to the characteristics of those working with him, studies of community and parole agents—including their personal and professional attributes, orientations, and modes of adjustment—are going on.

The importance of including an educational program to help youths effect a more satisfactory social adjustment is emphasized. Specially trained personnel work with treatment personnel to offer a more rounded and continuing developmental experience to otherwise academically deprived, deviant, and delinquent youth. A proposed institute, to be operated by project personnel, would offer training in differential diagnosis and treatment to a wide variety of individuals involved in treatment of juvenile offenders.

The Role of the Community Mental Health Center

During the last year of his life, President Kennedy, in an unprecedented message to Congress, asked for a "bold new approach" to the prevention and treatment of mental illness. That historic call to action resulted in the passage of the Community Mental Health Construction Act of 1963 and, more recently, of a staffing amendment to that act. Together, these legislative milestones have provided the physical and professional foundations—the bricks and the brains—for realizing the late President's goal.

The National Institute of Mental Health—through its Community Mental Health Facilities Branch—now carries the responsibility for assisting the States in making the bold new approach a reality for those among us in need of help. When built and staffed, each Center will, of course, have its own characteristics—reflecting the special needs and resources of the area it serves. But the major focus across the country is a singular one: to provide a complete range of mental health services at the community level—easily accessible, comprehensive, continuous and coordinated.

Services for children are planned as an integral part of each Center's overall program; the full range of diagnostic, therapeutic and preventive approaches to be applied to the general population will be available to children as well. These include emergency services, inpatient care, partial hospitalization (that is, day or night care), outpatient care, pre-hospitalization care, aftercare, rehabilitation, consultation, and information.

Approaches to children's mental health problems have usually involved individual treatment of the child or of specific family members on an outpatient basis. Recently, however, treatment procedures have begun to embrace such techniques as family therapy, group therapy for parents, and group therapy for children; in some instances, these programs have shaded into day care for children, providing, when necessary, a more sustained therapeutic environment. The Center promises to provide an optimum setting for the selective application of such techniques, and of treatment efforts along a continuum of intensity.

Inpatient care for children has, in the past, been limited—primarily in the often inappropriate environment of State hospitals and, to a lesser extent, in residential treatment centers. Its use was often dictated by necessity, when no alternatives were available. The number of children who require inpatient care can be expected to be small in areas served by a full range of outpatient services. And, it is hoped that the use of a greater variety of approaches and of the treatment flexibility afforded by a coordinated Center program will result in a faster return to the community of those children who do require institutionalization.

But at a level of effort well before hospitalization, the Center will play a major role in the prevention of mental illness by focusing efforts on some of the child's key stress situations—life-transition points such as entrance into school, adolescence, or disruptive family movement from one location to another. Preventive work carries a high priority in the Center's attack on child mental illness, for many behavioral difficulties of children can be aborted or alleviated if adults in the child's immediate environment can obtain advice before problems arise, or if a child can receive treatment early.

Accordingly, consultation services, a major function of Community Mental Health Centers, will be made available to those persons most likely to interact with children—to public health nurses, physicians, pediatricians, school personnel, and to those working in well-baby clinics, settlement houses, church groups, recreation departments and courts. Such consultation services will, in effect, provide training in basic mental health principles to persons whose work bears so directly on mental health. The aim here is to encourage them to construct their overall programs in ways that will strengthen and promote the mental health of children, to help them identify early those children with emotional or intellectual disturbances, and to engage them in rehabilitative and corrective efforts with those children in need. Ideally, consultation services might serve as a matrix in which other services to children may be embedded.

In effect, then, all presently existing services available to children will continue to be provided by Community Mental Health Centers. They will, however, be more clearly focused, intensified, and refined. And, by virtue of its flexibility of treatment approaches, its use of new methods, and the availability of related community resources, the Community Mental Health Center promises significant gains in the continuing struggle to improve the mental health of our youth.

Training Professional Personnel in Child Mental Health

INTRODUCTION

The research and clinical contributions described in the previous chapters depend, in the final analysis, on the availability of sufficient manpower dedicated to the field of mental health. One of the key programs of the National Institute of Mental Health—the Training Grants Program—is therefore designed to help meet the Nation's need for professional personnel in the area of mental health. Through the program, financial assistance is provided for training for both clinical and research careers; since the inception of the program in 1947, more than 25,000 students and professionals have received such training in mental health through NIMH auspices.

In effect, the Institute's entire training effort represents a contribution to the resolution of problems of child mental health; in the training area, as in research, a differentiation of child mental health from other aspects of mental health is necessarily arbitrary. The well trained psychiatrist, for example, who counsels parents without ever seeing their child is having his impact on the child's world—for whatever events touch adult lives will eventually find a reflection in the lives of the children in their environment.

It should be borne in mind, therefore, that a complete description of training in child mental health would include all training in mental health. In this chapter, however, only those activities which have the child as their primary focus will be described briefly—in terms of individual discipline or program area.

PSYCHIATRY

The Institute's child mental health training program in psychiatry continues to have an increasing impact in a variety of settings. All medical and osteopathic students and most practicing physicians are now influenced in some degree by the child psychiatry profession and the recent growth in the teaching of child psychiatry; the same is true for members of other professions—those, for example, engaged in the areas of law, education, or politics. Indeed, the field has left untouched few segments of the public at large.

The NIMH psychiatry training program has strongly encouraged this type of mushrooming impact through the support of specialty training; further, the growth and improvement of child psychiatry teaching to psychiatry residents, medical students, and nonpsychiatric physicians have been actively supported. Institute support has been crucial in placing trained psychiatrists in new areas, and in the development of child psychiatry training programs in communities, medical schools and other institutions where such training had previously not existed.

The Institute has been guided by the concept that the well-trained general psychiatrist should be able to deal with emotionally disturbed children and their families as well as to provide consultative services to community agencies. Accordingly, NIMH supports child psychiatry training components in basic psychiatry residencies as much as it does the training of child psychiatry specialists themselves.

Postresidency training in subspecialty fields of psychiatry is becoming increasingly common. While child psychiatry and psychoanalysis are currently the most formalized subspecialties, new fields are developing. Five such specialty areas with greatest relevance to child mental health are: community mental health; mental retardation; college mental health; adolescent psychiatry; and corrections, law and delinquency.

Training in child mental health for medical students has been supported in a number of ways. For example, with the increasing number of child psychiatrists, faculty appointments for child psychiatrists in medical schools outside of large urban areas have been supported; and, more basic scientific training and research in infant and child development has been incorporated in the medical school setting.

All medical schools and osteopathic schools receive NIMH support for training programs in psychiatry; in addition, medical students are provided with stipends which support individualized, elective training in research or clinical psychiatry. Support is also avalible for nonpsychiatrist physicians who plan to continue their practice after specialized training in psychiatry; a large proportion of such programs are specifically in child mental health—directed at pediatric residents and practitioners.

PSYCHOLOGY

The variety of research and applied training programs in psychology supported by the Institute carry a significant impact on the child mental health field. The purpose of the research training programs is to produce scientists who will add to our knowledge and understanding of human behavior; the programs range from basic training in general-experimental and physiological psychology, through personality and social psychology, to programs specifically concerned with child and developmental psychology—including such specific areas as mental retardation. The applied training programs in psychology similarly cover a relatively broad spectrum, varying only in the degree of their relevance to the child; these include, for example, clinical psychology, school psychology and counseling psychology programs, and even more specific programs such as those designed to provide specialized training for clinical psychologists in juvenile court settings.

Clinical programs represent the major focus of support in psychology. From these programs have come skilled practitioners to work with disturbed children, as well as research personnel to contribute to our knowledge of human personality and its development. The school psychology and counseling programs are similar in breadth to the clinical programs, differing mainly in that they are more directly focused on the developmental years. And, even in those applied programs seemingly unrelated to child welfare, a relevance exists. Programs in industrial mental health or architectural psychology, for example, do not currently include aspects bearing directly on child mental health, yet it is recognized that the development of children raised in industrial communities is influenced by industrial mental health factors, and that the design of homes, places of work, study, or recreation affects psychological as well as physical growth.

SOCIAL WORK

The NIMH social work training program supports training for work in child mental health along two major dimensions. One is the training component in programs of child care and treatment—an aspect of the support of psychiatric social work, juvenile delinquency workers, group services, school social work and related fields. The other is in the field of social work education; here, funds are provided for classroom teaching and field instruction dealing with child life experience and its meaning for family mental health.

New approaches are being used in the training programs for child care and treatment. Schools are moving away from the traditional field experience into specific settings and combinations of settings which are service oriented—mainly within a preventive context. For example, in one project, social work students deal with third grade children who have behavior problems, on the assumption that problems solved at this age level will prevent more serious difficulties during adolescence. Another student unit is attached to a housing project, organizing groups of teenagers as a preventive measure in dealing with delinquency.

Programs are also being developed in which social work students are learning to coordinate various agencies' services for children—for example, in organizing into a neighborhood service association those children who had been referred by school officials as having behavior problems. As another example, in one of the advanced clinical training agencies, plans are underway for the trainees to obtain experience in giving consultation to judges and probation officers of juvenile court.

NURSING

The NIMH training program in nursing has consistently been concerned with the developmental and health aspects of child care. However, it is only within the past 5 years that a specialty in mental health child care has been developed in nursing, established through graduate programs specializing in child psychiatry; this relatively new concept has resulted directly from NIMH support.

The Institute now supports seven programs in child psychiatric nursing. In addition, one institution has developed a program addressed to training in the area of juvenile delinquency, three have developed training programs in mental retardation, and two have developed training programs in mental health in school nursing. The nurse specialist prepared through these programs is qualified to participate in the therapeutic care of children—in residential treatment centers, clinics, day care, home care, and emergency services.

While these are the programs exclusively concerned with child mental health, additional training is supplied in the adult and general graduate nursing programs, 40 percent of which include study and work with emotionally disturbed children, and usually also some work with normal children. The NIMH also supports undergraduate training in nursing. Although undergraduate programs do not provide for specialized training in the care of children, approximately one-half of the time spent in basic nursing education is devoted to learning about the development and care of children. In addition, through special grants, career teaching stipends are made available to exceptional psychiatric nurses in order to expand their potential for educational leadership.

PILOT AND SPECIAL TRAINING PROJECTS

An important effort in strengthening mental health manpower is the Institute's program in support of pilot and special training projects. Several types of efforts receive support through the program: the development of new and experimental methods of training in the mental health disciplines; the evaluation of existing teaching and training methods; the development of training programs in significant mental health problem areas in which there are serious needs for training personnel; and the development of training programs for persons whose role or functions may be related to mental health, and for new types of mental health personnel.

The programs vary along several dimensions. They may be based in a university, a child guidance agency, a residential treatment center, an analytic institute, a State mental hospital, a community pediatric hospital, or a recreational facility. They may vary from a single 20-hour course to full-time training over a 3-year period, and from non-degree to postdoctoral programs. In content, they comprise such categories as child psychotherapy, child development, juvenile delinquency, law, mental retardation, recreation, and teacher training.

A number of pilot projects have focused on the mental health training of professional persons concerned with the problems of crime and delinquency—for example, practicing lawyers, prosecuting attorneys, judges, and parole and probation personnel. Training in mental health for these persons is most important, since in the course of their work they become the necessary partners to the basic mental health disciplines in translation of treatment concepts into social action.

Efforts are made to provide support in areas where major applications of mental health methods will occur, and where support can provide a crucial point of intervention within an existing framework. For example, limited support in the field of educational administration has resulted—among schools of education across the Nation—in a pronounced awareness of the need to provide behavioral science and mental health content within all school administrator training programs.

INSERVICE TRAINING

The purpose of the inservice training program is to improve the quality of staff who care for the mentally ill and retarded in State institutions and in community mental health agencies; supported here are a number of efforts concerned with child mental health. For example, support has been provided to State institutions offering care and treatment either for mentally retarded or for emotionally disturbed children.

All programs are conducted in the institutional setting, and all trainees are directly involved in patient care activities. An objective of several of the programs is the development of new training materials such as films and programmed manuals.

Many of the institutions receiving support have established a close working relationship with nearby colleges and universities, with the result that the training programs now have academic faculty members serving as advisors, consultants, and teachers.

The general impact of the inservice training program has been to stimulate the development of increasing numbers of institution-based inservice training activities and to focus attention on the need for ongoing inservice training activities in a variety of settings serving the child as well as the adult.

SOCIAL SCIENCES

Several programs in study and research which bear upon the child mental health effort are supported by the Institute in the social sciences. These are primarily graduate programs in sociology—concerned, for example, with family sociology, integration of social structure and personality theory, demography of social disorganization, deviant behavior, and intervention in the development of pathology. The programs are designed both to enhance the competence in research skills of the participating doctoral students as well as to increase their general knowledge in substantive areas.

RESEARCH FELLOWSHIPS

Research fellowships awarded by NIMH support students and professionals in a variety of disciplines in research programs directly related to child mental health. The bulk of such work is sponsored by universities—somewhat over half of it in departments of psychology. A large proportion of the effort concerns psychiatric and psychological studies of child development and child disorders—including such areas as mental retardation, juvenile delinquency, schizophrenia, psychosomatic disorders, child behavior disorders, psychosocial development, and personality structure and dynamics. Many of the studies deal with social and cultural correlates of behavior; these range over areas having to do with attitudes, values and interests, education, family structure and dynamics, socialization of the child, and social perception. Still others are concerned with basic psychological processes, such as learning and conditioning, motivation, perception, and cognitive processes.

The overall effort is designed to provide an increasing number of skilled researchers among professionals in the mental health disciplines. In this way, the solution of many of the enigmas of mental illness will be speeded by the concerted efforts of scientists identified with the mental health field.

Information Programs in Child Mental Health

As part of its overall mental health information program, the National Clearinghouse for Mental Health Information provides a base for the collection and efficient utilization of current knowledge in the child mental health field. The Clearinghouse serves as a scientific information evaluation center—collecting, processing, and disseminating information related to mental health and illness. Included is a significant amount of material related to child mental health, intended to serve a variety of needs for information about normal child development, and the prevention, care, and treatment of mental illness in children.

One example of the activities of the Clearinghouse involves publications concerned with the mental health aspects of State and local programs for children and youth; these are being collected, indexed, abstracted, and processed for computer storage so that they will be amenable to demands for quick retrieval. Similarly, many current documents related to child mental health in the areas of crime and delinquency, social work, mental retardation, drug dependence and abuse, and psychopharmacology are being indexed and abstracted. And, educational materials dealing with child adjustment, family life, and human relations—part of the growing Clearinghouse collection—are being summarized in the form of annotated bibliographies.

As an indication of the growing capacity of the Clearinghouse to serve the scientific and professional community, here is a sample of the subjects on which inquiries were received and answered during the early months of 1965: mental illness in children in non-Western countries; what industry is doing for the abnormal child; research related to psychological development of children; problems of school dropouts; side effects of psychoactive drugs in children; drug treatment for behavioral disorders and schizophrenic disorders in children; the use of psychopharmacological agents with children; autism in childhood; the role of nursery schools in preventive mental health; the effects of outdoor experiences on emotionally disturbed children of school age; the effects of psychoactive drugs on pregnant women and unborn children; and the impact of cultural deprivation on the child.

As the technical capacities of the Clearinghouse grow, it can be foreseen that its services in the child mental health field will expand—both in terms of the variety of information stored and the capacity to respond quickly and efficiently to requests for data from both the research and clinical communities.

The Task Ahead

This report has provided a sampling of the far ranging activities of the National Institute of Mental Health devoted to improving the mental health of children. Pictured is a coordinated and unrelenting effort by all segments of the Institute, and involving the work of scientists, clinicians, educators, and community leaders devoted to the health and welfare of our youth.

Strides have been made—as reflected throughout the report. But the task ahead remains formidable. New avenues of research must be opened, and older ones more fully explored; daring techniques for treating and rehabilitating the disturbed child must be developed, tested, and refined; increasingly large numbers of professionals must be trained and tuned to the mental health needs of our children—some dedicated to research, others who offer that rare blend of warmth and authority that marks the great clinician and the helping process.

Finally—and perhaps most important—great and sweeping social changes must be the heralds of the child's liberation from mental illness. The wars against poverty, ignorance and hate are wars fought in the name of children. Psychotherapy cannot erase the anguish of hunger, there is no drug to induce knowledge and self respect, and the noblest community mental health center cannot function in a community that is not at peace.

In the final analysis, the mental health of our children hinges on the maturity and health of our society—from the smallest unit to the largest. The structure of the home and the well-being of the family, the compassion of the surrounding community, the social conscience and social action of our government and its citizens—all of these are crucial. If we fail at any point, the outcome is clear: The hurt child grows to hurt his own children and—despite heroic individual efforts—we walk an inexorable treadmill of pathology and pain.

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